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RECONSTRUCTION DAYS IN HOME ECONOMICS

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In common with the rest of the world home economics is in the midst of its reconstruction days. Reconstruction is always a difficult and delicate task: difficult, because it may require the uprooting of traditions and customs established often with toil and pain; delicate, because, while it is an attempt to give to cherished ideals a new form, it seems sometimes to destroy them. But that way, all recognize, lies ultimate progress. "New occasions teach new duties. Time makes ancient good uncouth" is a statement constantly being demonstrated in home economics.

The difficulties in this particular instance are increased by the fact that home economics has so many vulnerable points. In most occupations there are "honorable points of ignorance" for the layman; not so as regards home economics. No wayfarer on the highway of life but considers himself a very competent critic of some one of its numerous phases. The recognition of this fact brings recognition of its corollary. The contacts are all made in home economics, the doors are all open. It remains for its advocates to enter in and possess the land.

In these days it is quite the habit to blame all the ills of life upon the World War, but home economics has a very different story to tell, for here the war was a great benefactor. The public learned more about food and nutrition and the relation of food to health in one year then than in any ten years preceding. The vital relation of food to health and efficiency was demonstrated on a great scale by the army and the ill-nourished children of other lands. The vocabulary of food was acquired by the layman rapidly. Calories were removed from the funny column of the newspaper and became the measuring unit of the food resources of the Allies.

Real advance in the estimation of the public in home economics in war time was made chiefly along the lines of food, economics, and research. The necessity of the situation put emphasis upon wise spending for both food and clothing, and showed the desirability of having the woman

as the spender of the income made as intelligent as possible. The government undertook the teaching of thrift on a large scale. Again, the need of much knowledge for the answering of numerous questions emphasized as never before the need for research. The National Research Council gave home economics a place in its counsels. As a result home economics had one grand demonstration from shore to shore during the war. It nearly killed us off, but it made us and our cause eminently respectable.

As I see it, reconstruction means adjustment in the teaching of home economics in regard to:

a. Subject matter

b. Method of presentation

c. Equipment

d. Larger relations to the school program and through that to the social program of the community; importance as an interpreter and defender of the ideals of the American home.

Subject Matter. The attempts to use substitutes, to teach those less familiar with food and its uses, required and still require a considerable weighing and balancing of the subject matter, a discarding of the non-essentials and an emphasis upon the essentials. A lesson in preparing food now is not an isolated performance for the purpose of learning manipulation, but the dish to be prepared is selected with care to illustrate as many points as possible and when finished is given its setting in a meal, its cost, its food value, its sequence, its relationships to production and the larger aspects of the food question.

The Method of Presentation. In common with other subjects of the curriculum, home economics has been assailed by the project method, by unit courses, by tests for appreciation, for reasoning, for skills, for information, and there has been much talk about objectives, ultimates, specifics, and activities. The writer confesses to a good deal of sympathy with the woman who said she did not understand very well about dividing up the brain for so many different jobs; so far as she was concerned she wanted her pupils to be using all the brains they had all the time for all the divisions. However, it is doubtless possible that, in this orgy of curriculum making and testing which is now going on, home economics may emerge stronger and better, representing the survival of the fittest.

Equipment. Home economics is not an experiment. In the forty years in which it has been worked at with more or less intelligence many isolated facts have been discovered, and new relationships which are of use in the making of school programs and courses of study have developed. It is quite generally known what constitutes a well planned

school kitchen, even if some blind leaders of the blind are aspiring to mahogany table tops and tiled floors, and others would solve all the difficulties by a unit kitchen. The consensus of opinion seems to be that there are many possible types because of many varying conditions, each good after its kind. Unit kitchens have their place even if in some cases they result in a stove which is little more than the discarded hot plate, and the oven very little better than the one used with the hot plate. One good range with a well-lined oven and an accurate measurement of temperature is worth much more in real advance in food work.

A word of warning is to be given against equipment whose one virtue is expense. The day of reckoning will surely come when home economics kitchens as other kitchens will be judged by their adaptation to meet the needs of the community and their capacity for accurate work. Another word of warning is to be sounded against a great desire to be too accommodating to the makers of school programs. Cooking processes require time. The work needs to be done thoughtfully and carefully, not with the one aim of getting through. Therefore, the one hour program for food work is not to be considered desirable. One great mistake is still to be charged to principals and superintendents who expect the teacher of home economics to welcome to her class representatives from every one of the four years of the high school, but never think of asking that accomplishment of the teacher of mathematics.

Larger Relationships. The public demands are to be recognized. The tests many and varied are to be met, but the workers themselves must keep ever in mind the larger aspects of the question. Man does not live by bread alone—economics can not do everything. Spirit and life have their sources too and must be cherished.

Home economics workers must not be so occupied in making white sauce or its counterfeit paper-hangers paste, that they forget that the art and beauty of life are included in their programs; that the finer forms of social intercourse, the development of gracious womanhood have their place in home economics training. The public wants what was best in the old forms of family life represented in the modern life. It should be enriched by the discoveries of science, the development of art, the social and civic responsibilities. But it must be permeated by the spirit of service and loyalty to the highest ideals. Only as home economics meets these larger issues does it render its best service to the nation.

METHODS OF VITAMIN INVESTIGATION

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Among vitamin problems of paramount interest to home economics teachers are those which deal with the quantitative distribution of each of the vitamins in foods and the effect of cooking, storing, drying, and other methods of preservation on these accessory factors as they occur in foods. Such questions as the effect of temperature, the surface exposed to oxidation, acidity or alkalinity, solubility in the cooking water, on the rate of destruction of the vitamins are all very practical ones which are not conclusively answered, as yet, and which might well be studied by women who are familiar with the cooking processes.

McCarrison's (1) recent work on vitamins has given a dramatic demonstration of the fact that there must be, within limits, a balance maintained among the different food constituents, and that, if that balance is disturbed, the "metabolic harmony" ceases. When we consider our inadequate knowledge in regard to the quantitative aspect of practical dietetics, we realize the importance of careful work along this line. There is then a wide field for investigation, both in learning what constitutes a complete diet and in determining what foods may be combined to make a complete diet.

In reviewing the literature on vitamins, one is impressed with the widely differing conclusions reached by various workers. This is but natural considering the difficulties. Until the chemical nature of the vitamins and methods of isolating them are known, we must necessarily work with preparations which are mixtures of substances of unknown composition. Then, too, the laborious biological feeding method introduces many variables which may not be controlled, especially by the inexperienced worker.

Impressed with the importance of standardizing the quantitative method of vitamin determinations, Emmet (2), Sherman (3), Funk (4), and others have recently called attention to some of the points which must be observed, if significant results are to be obtained. They will be discussed briefly here. For more complete information, the reader is referred to the articles and books listed in the bibliography.

I. *Biological reagent.* Since quantitative chemical determinations of the vitamins cannot be made, the biological method is the only one available. The first problem, then, is to find a form of plant or animal

life which will serve as a suitable "reagent," that is, a form of life which requires the particular vitamin under investigation for its development, and shows characteristic effects when the vitamin is lacking. For a study of vitamin B, the tadpole, paramecium, yeast, chick, pigeon, and rat have been tried. Of these, the pigeon and rat have, up to the present time, yielded the best results. For a study of vitamin A, the rat, and for vitamin C, the guinea pig, are the standard laboratory animals, although several others are being tried.

The requisites of a satisfactory animal for feeding experiments are that they shall breed easily, mature early, consume a small amount of food, take artificial diets readily, stand confinement well, and be resistant to infections and intestinal parasites. The rat meets these conditions more nearly than other animals and has, therefore, been generally used for the study of vitamins A and B. Since the rat does not develop scurvy, it is of no value in a study of vitamin C.

A very important factor is the condition of the experimental animals. It is thought best that they be bred by the investigator. Emmett in his work with pigeons has found that "it is necessary to consider breed, previous feeding, age, body condition, weight, and season of the year." Sherman's experience with guinea pigs in the study of vitamin C indicates that animals six to eight weeks old and weighing 300 to 350 grams, give most uniform results. "If the animals are much younger, the results are somewhat less regular; if much older, they are somewhat less susceptible and also less desirable in that they are less likely to show good growth up to the time of the onset of the scurvy symptoms."

II. *Control diet.* A basal control diet must be found which is complete for growth and maintenance of the experimental animal. In spite of the vast number of investigations done with rats, Funk questions whether the optimum growth curve of these animals is known. A comparison of the normal weight curves of Osborne and Mendel and McCollum with that of Funk shows the latter to be on a much higher level. This raises a doubt whether diets which have been considered complete have actually met all the nutritional requirements of the rat. In addition to the control diet, experimental diets must be found which are known to be complete in every respect, except the one factor that is being studied.

III. *Artificial diet.* In the preparation of the artificial diet, it is essential that all the ingredients are vitamin free. Many of the differences of opinion among workers have arisen from the fact that this precaution was not observed. The commercial casein, frequently used as

the protein, must be further purified by extraction with alcohol and ether, or by dissolving in alkali and reprecipitating. Lactose, which has been widely used as a constituent of diets, was shown by McCollum and Davis to contain appreciable amounts of vitamin B, and must, therefore, be subjected to purification. Sherman, Le Mer, and Campbell (5) have found that dried milk powder, desiccated on open trays at 110° C. is completely free of vitamin C, while fresh milk autoclaved at 120° for one hour still contains small amounts of the vitamin, the presence of which must vitiate the results to some extent.

IV. *Preparation of vitamin material.* An exact method of procedure must be followed in making the vitamin preparation. As has already been stated, until the vitamins can be isolated we must of necessity work with mixtures of substances. Workers frequently have not given a sufficiently explicit description of the mode of preparing the vitamin extract, and this has led to confusion and controversy. The question is not yet settled whether the antineuritic vitamin and vitamin B are identical. Recently, Funk and Dubin have proposed that the vitamin B preparations which have been used have contained at least two vitamins, or perhaps, two forms of the same vitamin, both of which are necessary for the rat, one necessary for the pigeon, and the other for yeast. Then, again, the order in which constituents of the diet are combined should be uniform, since it may affect the texture and palatability and thus the food consumption.

V. *Administration of vitamin.* The vitamin preparation should be administered so that the quantity is known. It may be desired to test its prophylactic or its curative properties. Thus, the amount of vitamin B preparation necessary to prevent polyneuritis in pigeons, or to promote normal growth in rats, may be determined, or the amount required to *cure* polyneuritis, or to *restore* normal growth after the rat has ceased to gain in weight. For practical purposes the prophylactic effect has probably the greatest significance. Again the vitamin preparation may be incorporated as a constituent of the diet or it may be administered separately from the basal ration. In the first case, the minimum proportion in which the vitamin preparation must enter into the food mixture to obtain the desired results is determined. In the second method the "minimum daily dose" of the vitamin preparation is found. This latter method is the more satisfactory unless a food such as corn is being tried, which could not be given in doses in addition to the basal ration without increasing the food consumption.

If the effect of cooking on the vitamin content of such food is to be determined, the minimum amount of the unheated material necessary for growth or protection against a deficiency disease must first be determined. Then the minimum quantity of this same food, cooked, which is necessary to produce the same result is found. A comparison of results will then tell what proportion of the vitamin has been lost. Unless the *minimum* is determined in both cases, the results can have no quantitative value.

VI. *Amount of food consumed.* This illustrates the importance of knowing the daily food consumption of the experimental animal. If the material used as a source of vitamin is incorporated in the diet, no knowledge of the actual amount of vitamin required can be obtained unless the total quantity of food eaten is known. Also, without such information the effect of inanition or of other dietary deficiencies may be confused with a vitamin deficiency.

Since the food consumption may vary with change in diet, or change in texture and palatability of the food mixture, these points must be kept constantly in mind. To obviate the loss of food by scattering, various devices may be adopted, such as the use of special food cups.

VII. *Importance of hygiene.* The recent results obtained showing the effect of sunlight in the prevention and cure of rickets introduces another factor which is doubtless of importance in animal studies. Ventilation, temperature, cleanliness, freedom from vermin and infections, exercise, all should be given due consideration. The recent controversy as to whether xerophthalmia is the direct result of a deficiency of vitamin A, or due to an infection entirely controllable by sanitary precautions is an illustration of how difficult it is to make certain that the dietary factor is the major one.

VIII. *Duration of experiment.* The tests must be run long enough to make the results conclusive. When animals are put on a new diet, the food consumption is likely to decrease unless they are force-fed. Failure to respond might in such a case be due to insufficient food rather than to any deficiency.

IX. *Specific deficiency effects.* Finally, the characteristic effects of the specific dietary deficiencies must be learned by experience. Observations of weight curves, body condition, survival period, and autopsy findings are all significant. Sherman, La Mer, and Campbell (5) have worked out a scheme by which grades of severity of scurvy may be differentiated. It illustrates the newer development of the *quantitative* aspect of vitamin investigations.

Desirous of standardizing the methods of carrying on vitamin investigations, Emmett (2) has proposed that several laboratories cooperate in formulating a definite working plan as to basal rations, animals, and technique of feeding.

A committee has been appointed consisting of A. D. Emmett, A. F. Hess, E. V. McCollum, L. B. Mendel, and H. C. Sherman representing the American Society of Biological Chemists, the Society of Experimental Biology and Medicine, and the Committee on Food and Nutrition of the National Research Council. The function of this committee is to consider the advisability of clarifying, unifying, and, if possible, suggesting means of improving present methods of vitamin research.

A cooperative plan of this sort should aid greatly in obtaining consistent results and arriving at definite conclusions.

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THE APPLICATION OF DESIGN AND COLOR TO MILLINERY[1]

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Millinery is not only a big commercial problem in our country but is a constantly recurring personal problem for every woman who attempts to keep within the style limits. There are many agencies engaged in teaching millinery in its various forms. Among these are the public schools, including junior and senior high schools, technical, trade, and night schools, normals, and colleges. While our normals, colleges, and

[1] Extracts from a paper given before the Connecticut Valley Home Economics Association.

some of the technical schools prepare most of the people who go into the teaching profession, it is left for the other branches to prepare people to do millinery work for either personal or commercial purposes. It would seem, then, that the function of the junior and senior high schools should be to lay a firm and lasting foundation for these other agencies, and to help those people who are not going into the millinery business, but must needs select hats from time to time.

Let us consider the foundation that should be laid in all elementary millinery work if the average person is to be able to judge or create a good hat.

First: a working knowledge of the fundamental principles of design. There should be an understanding of such terms as line, balance, symmetry, monotony, proportion, and suitability to person and purpose, so that these terms may be intelligently linked with the other phases of millinery.

Second: an understanding of the human feature and form types. This should include a study of blondes, brunettes, and combinations of the two; the various types, as cute, dignified, severe, distinctive, and the great mass of people known as ordinary. Then there is the classification as to form—tall and slim, short and stout, with many variations. These types resolve themselves into two main classes of women; those who ought to avoid points and long severe lines; and those who need to beware of circular, square, or squatty effects.

Third: a practical knowledge of color. Someone has said that an understanding of color is the crying need of the nation's women. It is not necessary to have an intricate knowledge of color terminology. One does not have to worry about such terms as Pekin blue or Harding blue, but should be much more concerned as to whether a blue has a grey, green, yellow, or violet cast, and which of the many varieties of blue is best suited to the particular type under consideration. Every complexion has a keynote or tint, and colors should harmonize not only with the features of the complexion but with all other colors worn. Pupils should understand harmonies of contrast and similarity and the value of texture combinations. Girls should be taught that they must understand color in its simpler forms before they attempt subtile combinations, and that they can emphasize their good features by selecting certain lines and colors.

To make our work effective, we need a sympathetic backing from our superiors, which would insure proper conditions for correlation with the art departments in our schools, and we need teachers of millinery who

understand both the art and technical sides of the problem. With a suitable background laid in our elementary schools and the elementary departments of the advanced schools, anyone with ordinary talent for millinery can take advanced and technical work in schools, or in millinery departments of stores or shops.

Is it really economical for all girls to learn to make hats? If time and energy are to be considered, the average business woman or mother ought not to make hats for herself or her family. Millinery courses in schools are expensive and only one girl out of ten has a real "feeling" for hats, or anything like a milliner's touch. It would be far more sensible to include in the clothing course considerable work in the application of design and color to millinery, and to let the actual making of hats come later as an elective. The girls would be old enough to handle the materials intelligently, and such study would result in a knowledge of millinery in general which would prove a lasting satisfaction.

AN ANALYSIS OF THE FIELD OF INSTITUTION MANAGEMENT AND THE PREPARATION FOR IT[1]

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The accompanying chart was drawn up as a means of showing graphically the fields of institution management, in order to organize a curriculum which would be satisfactory in preparing students for institution management work.

To prepare adequately for an occupation, it is necessary to know the specific responsibilities and activities of that occupation. Therefore, in the first column of the chart the various phases of the work have been listed as shown under "fields;" in the second and third columns is given the information one must have in order to qualify for positions in these fields; in the fourth and fifth are listed the courses which supply the required information, the fifth showing those courses which are basic and which in a college four year course are given first in the curriculum. This last group also shows the related work essential to a knowledge of the occupation. While the subject matter will remain the same, the courses offering this information will vary, necessarily, in different schools and colleges.

[1] The authors wish to thank Mildred Weigley, Chief of Division of Home Economics, for making important suggestions in the preparation of this paper.

Analysis of the field of institution management

Fields for which institution management is a preparation					*Necessary information*	*Contributing courses*	
						Home economics courses	*Related courses*
Cafeteria management Tea room management Direction of school lunches Hospital dietetics Hotel management Dormitory management Direction of community kitchens Catering Direction of social service enterprises such as soup kitchens, lunch rooms, boarding homes	Institution management, responsibility for	Occupational skill	Care of food		Purchasing Dietaries, menus Preparation Service Storage Disposal of waste	*Marketing Food study Dietetics *Quantity cookery *Institution experience Sanitation	Principles of marketing Chemistry Physics Physiology Bacteriology
			Care of physical plant		Heating, lighting Ventilating Sanitation, cleanliness Repairs, upkeep	Home equipment *Institution management problems *Institution experience	Chemistry Physics Art Design
			Record keeping		Filing Accounting Correspondence	*Institution experience	Economics Accounting
			Care of money		Cashing, checking Depositing	*Institution experience	
			Care of linen		Repairing Marking Laundering Storing	Textiles *Institution experience *Institution management problems	Chemistry Physics
		Administration	Organization of new work		Organizing, charting Plans and policies regarding land, building capital, credit, equipment, labor, profit, growth	*Institution management problems *Institution management practice	Industrial history Economics Business organization
			Employment management		Selection, placement Scheduling, duties Hours, wages Living conditions Recreation	*Institution management problems *Institution management practice	Psychology Sociology Economics Labor problems
			Superintendence of plant		Establishing system Plant planning Equipment Decoration	*Institution management problems *Institution management practice	Architecture Art Design
			Financial management		Budgeting Control of costs Purchasing Investments	*Institution management problems *Institution management practice	Economics
			Atmosphere		Relation of manager to patrons, employees	*Institution experience *Institution management practice	Psychology Sociology

To be sure that the content is cared for in the courses given, the institution working on this problem planned its curriculum in relation to the content as shown in column four. The four courses starred deal specifically with institution management. Institution experience and large quantity cookery which comprise laboratory and lecture work are prerequisite to institution management problems. The latter course takes care of the administrative phases of institution work. Institution practice is a laboratory course in institution administration and follows the lecture course.

It would seem that one of the most important points in the teaching of institution management is to establish a satisfactory sequence of courses which shall give, together with subject matter, a graded experience to the student who comes into institution management work interested, but with no very clear idea of what it means and therefore with little background for the study of the more advanced problems of administration. This analysis has helped to make clear the importance of a sequence of courses. It would seem advantageous for students to have a working experience in an institution before taking up the study of the problems of organization, labor, plant planning, and equipment. It has been found also that while a working experience is necessary, practical experience outside the courses offered in the college curriculum, may prove an actual handicap. This, of course, depends entirely on the institution in which the practical experience is obtained. It is wise therefore to hold rather strictly to the prerequisites as outlined in the courses of study, regardless of the fact that there are constant demands from students who wish to enter the management lectures by substituting previous experience for large quantity cookery and institution experience as offered in the course of study. Another advantage in offering this sequence of courses is that students not fitted for the work are eliminated promptly. Also, the fact that large quantity cookery and institution experience may be taken as electives means that an interested student may try herself out in institution management work without the expenditure of an undue amount of time in case she does not wish to continue.

It may be said that instead of the course in institution management practice mentioned above, a six weeks to three months assistantship, similar to that required of hospital dietitians may be substituted. In this latter case, it is necessary that students be given work in approved institutions only. If this plan is adopted it must follow the completion of the institution management courses and would probably be taken after completion of the work for a degree.

A COURSE IN BUYING INSTITUTIONAL EQUIPMENT AND SUPPLIES

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Since courses in institutional administration are being developed simultaneously in many parts of the country, it may be of interest to know how we have met the demand at the Iowa State College. We now offer the following courses: Institutional Foods, Buying of Institutional Equipment and Supplies, Institutional Management, Institutional Field Work.

In general the second course includes: study (in detail) of institutional kitchens, selection of kitchen equipment and dining room, bed room, and living room furnishings, cost of upkeep and replacement, large quantity buying of foodstuffs, preparation of a project selected by each student in line with her special interests.

On our campus we have five dormitory kitchens under the supervision of a graduate in home economics. They offer a remarkably fine field for observation, as the standards of order and cleanliness are extremely high. The cooks eagerly consult with students from the Division of Home Economics about equipment. Students visit the kitchens in groups of two. The kitchens of the college cafeteria and the college hospital are also open to us. In the town of Ames, we have access to commercial cafeterias as well as to the hotel and hospital kitchens, through the courtesy of the managers who understand our purpose.

In addition to this, the classes make an educational trip to Des Moines to visit the tearooms managed by large department stores, as well as commercial cafeterias, large hospitals, and hotels. By the time this trip takes place the class has had a thorough preparation for it, by the detailed study of institutional equipment: ranges, gas stoves, refrigerators, steam tables, urns, bread and butter cutters, dish washers, in a large variety of makes and styles have been discussed as to their desirable and undesirable points, so that there is intelligent interest when a chef offers to have his dish washer or his favorite mixer exhibited in action. The observation of details is growing to be such a habit that the students are almost afraid they will be found turning over their plates at a luncheon to get the name of the ware, or hunting for the trade mark, or the hall mark on a friend's silver!

The purchasing agent of the college gives lectures each quarter on centralized buying. The subject of the ethics and procedure of establish-

ing credit with business firms is developed. Buyers, whose extensive experience and success are well known, give some of the other practical aspects of dealing in large quantities; for instance, buying in carload lots, storage and handling of meat, and dealing in futures.

We do not attempt in this course to include administrative phases of institutional work, as these problems come properly in institutional management. We do, however, study the storeroom, requisition systems, and the modern perpetual inventory methods, because they are inextricably bound up with the details of purchasing and distribution within the institution. The students make the wholesale orders for groceries for the daily luncheon and tea service. They also check the bills and learn to read the strange abbreviations of the trade. They estimate the discounts, and incidentally learn the sources of supply.

The class is making a collection of samples which will become a permanent exhibit: for example, insulating materials for refrigerators, filling for mattresses, samples of institutional cotton and linen, and the many other materials which show differences in value and will make points in selection more clear. We make constant use of hotel and hospital magazines, the JOURNAL OF HOME ECONOMICS, and others which include an institutional section. The undergraduates are encouraged to take summer positions in kitchen or dining room work as preparation for these courses. A number of the girls go to National Park or the lake resorts and combine institutional experience with the pleasures of travel and vacation.

We hope to develop the kinds of courses which will attract women of talent and experience, who have not had opportunity for technical training, as well as graduate students who wish to specialize. Other departments on the campus coöperate to enrich our courses. The Department of Economic Science offers a course in institutional accounting; there are electives in business psychology, applied art and history, journalism and advertising, and other related subjects which, woven together, give the student, who wishes to specialize in this phase of home economics, a broad background.

To quote Mary A. Lindsley of the Grace Dodge Hotel, the important part of institutional work is not what is done but "how it is done and what is done to glorify it." Certainly this is our function in college teaching, to glorify work, and to direct and stimulate the enthusiasm of college students, for it is they who in the near future will become the competent assistants, the clever purchasing agents, the wise and efficient managers of public dining rooms.

PROJECT METHOD OF TEACHING LUNCH ROOM AND SPECIAL COOKERY

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OUTLINE OF SECOND YEAR HIGH SCHOOL COURSE

TIME, 1½ HOURS DAILY FOR 20 WEEKS

Aims of the course

To develop girl's responsibility.
To develop managing ability.
To train girls to think for themselves.
To teach proper food for children of different ages, especially of school age.
To teach good eating habits.
To teach girls to enjoy all foods.
To improve the family dietary.
To make girls intelligent buyers of food.
To increase speed in preparation of food.
To teach economy in the use of fuel.
To teach neatness and orderliness in all work.
To develop ability to take entire charge of one's home food problems.
To develop ability to plan, prepare, and serve suitable meals for all types of people.
To develop ability to figure costs in money and labor quickly, also to estimate same.
To teach simple banking.
To teach accounting and its value.
To teach appreciation of the value of personal influence and to know how to use one's own for improvement of conditions in markets, bakeries, dairies, etc.
To develop a true spirit of hospitality.

Units of the course

A. Informal receptions for mothers, H. E. Day, etc.

Discussion of purpose of gathering. Selecting guests. Invitations. Planning entertainment. Program of some sort. Exhibition work. Conversation. Place for wraps. Types of refreshments usually served—very simple, more elaborate. Decoration of room and table. Actual preparation of food. Serving. Marketing. Receiving and entertaining.

B. Food sales

Discussion of foods usually served. Foods for which there is the greatest demand and those on which the most profit can be made. Planning and arranging for place and date of sale. Means of advertising—making posters. Consideration of dishes for sales at special times, e.g. plum pudding at Thanksgiving time. Management and conduct of sale. Use of oven to best advantage. What foods can be made ahead. Actual baking. Actual sales. Figuring profits.

C. Box lunches

Study of general characteristics of good box lunches. Requirements of a box lunch for school children of different ages; for older members of family. Containers and packing. Comparison of cost of packed lunch with cost of cafeteria lunch. Hygiene of eating lunch. Preparation of individual foods that might be carried. Marketing. Preparation and packing of lunches for various ages of children and types of adults. Putting up train lunches for teachers at vacation times.

D. Picnics

Study of different types of picnic meals. Value of picnic as a recreation. Attractive picnic places in vicinity, how to get to them, effort and length of time it takes, advantages and disadvantages of each place. Planning food for picnics for different groups. Distribution as to what each shall bring. Entertainment. Cooking picnic foods. Service. Marketing. Actual picnics. The indoor picnic for winter months studied and given. Figuring costs.

E. Special Dinners

Study of more formal dinners. Room and table decorations. Making and buying place cards, favors, etc.; cost and attractiveness of each compared. Invitations. Receiving guests. Kind of meal dependent on types of those served. Table service. Preparation of special foods with special attention to fancy dishes. Planning, marketing for, preparing, and serving actual meals. Figuring costs.

F. Cafeteria

I. Organization at school.

A. Time—Every day throughout the course.

B. Content.

1. Points to be considered.

(a) Need of cafeteria in community.

(b) Educational value to patrons.

(c) Necessary food for school children with special reference to undernourished.

(d) Organization of work.

(e) Marketing.

(f) How improve on last years's cafeteria.

(g) Study of fuels used.

(h) Actual preparation of foods with special attention to neatness, cleanliness, attractiveness, speed.

(i) Serving.

(j) Cleaning up afterwards.

2. Method.

(a) Discussion of the need and the educational value.

(b, c) Reference work regarding dietetic needs of school children, including undernourished. Newspaper articles regarding same written by girls in English classes, if possible, and published in school and village papers. Posters advocating use of milk, etc., made and exhibited in rooms, some made in drawing classes. Talks or papers presented by girls to grade rooms. Reference work—how to vary essential foods.

(d) Girl to be manager with entire responsibility for one week early in course and another week later on. Contest as to best manager from standpoints of good managing ability, satisfactory results as to foods served, satisfaction of patrons, condition of room, profits. Trip to bank, study of checks, bank book, balance sheets.

(e) Trips to local bakeries, markets, and stores.

(f) Discussion of the good and bad points of last year's cafeteria. Girls write to other schools to find out their methods.

(g) Keeping records of amount of fuels used and cost of same.

(h–j) Discussion and reference work on points to be observed in cooking, serving, cleaning.

II. Home work.

All girls required to prepare material for posters and news bulletins, look up recipes and magazine articles, write letters, and get suggestions as to food for children. Manager to do banking and marketing and get prices from different stores.

III. Class room reports and discussions of home work.

Recipes classified, discussed, compared, selected by class. Newspaper articles read, discussed, and verified by reference work. Replies from schools read and discussed. Posters criticized from standpoint of whether or not they really have a message. Suggestions from children reported and class decides what to provide. Manager reports funds, and class decides what to do. Manager also reports best places to buy.

IV. Home project—The planning and marketing for all the meals for one week and the preparation of the suppers and all the meals on Saturday and Sunday, having guests for at least one meal. This could arise from the girls interest in her dietetic study, and her desire to improve her family's food habits and to show them what she has learned. Mother's interest secured by visiting the home and inviting her to school to see class at work.

A. Aims—To develop girl's ability to take entire charge of her family's food problem, excepting food for the sick. To develop responsibility, managing ability, marketing ability. To improve the family dietary. To develop the idea of hospitality.

B. Content of plan from student point of view.

1. What do I wish to accomplish?
   (a) Improve my family's dietary. (b) Help my mother. (c) Reduce cost of family food. (d) Prove my ability.
2. What must I know?
   (a) Family's food habits. (b) Amount to be spent for food. (c) How to prepare the usual foods. (d) Family's food requirements. (e) How to buy. (f) Materials on hand—staple groceries, preserved foods, garden produce, chickens.
3. What must I do?
   (a) Plan meals. (b) Plan time for preparation. (c) Market. (d) Prepare and serve meals. (e) Clear away. (f) Keep record of time. (g) Keep record of cost.
4. Where can I get help?
   (a) Mother. (b) Teacher. (c) Cookbooks. (d) Reference books. (e) Magazines. (f) Newspapers (g) Store clerks.
5. When will I do the work?
   (a) Planning meals—general planning, week in advance, more definite planning, one day ahead. (b) Marketing—as much as possible a week ahead, any daily marketing right after school. (c) Preparation—suppers in afternoon, Saturday and Sunday meals, Saturday morning baking. (d) Accounting and reports—in evening or as soon after marketing as practical.

6. What supervision will I need?
   (a) Mother to approve meals, especially those she is to use, to approve market order, to help with any difficult dishes. (b) Teacher to help with plans, suggest short cuts.
7. What records must I keep?
   (a) Family members and what they do. (b) Menus planned. (c) Menus served by me; results. (d) Time used in planning, marketing, preparation, etc. (e) Accounts. (f) My own judgment of my work. (g) Benefit work has been to me.

C. Supervision of work.
1. Original contact. Mother at school during class lesson.
2. Conferences. Individual or individual and group, according to number of children on same project. Time during class set aside each week.
3. Home visits. Before project begins. Once while girl is preparing a meal.
4. Reports. Oral at conferences. Final written.

THE PAPER DRESS FORM

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The paper dress forms which are so generally advocated by extension workers as an excellent aid to the home dressmaker offer an equally valuable suggestion for college classes in elementary or advanced dressmaking. The advantages of having a relatively accurate cast of the figure to be clothed, the small expense of manufacture, and the ease with which these light weight forms may be handled far outweigh any temporary discomfort the model experiences while the form is being made, and the slight inaccuracies which may occur in making or from the warping of the paper. In groups of people working together, there are always variations in types of build to such an extent that no one type of costume is suited to all. The difficulty of translating the problems of each of these types to something definite and concrete is greatly reduced

by a study of these casts and experimentation with paper and cloth patterns of various kinds. Pattern modelling can be done on these forms with speed and accuracy, and clothing can be tested for fit and general lines with such satisfaction that it seems altogether reasonable to believe that the time is not far off when every college course in garment construction will include work with these casts.

Various sets of directions[1] for making these paper dress forms have been made available. In general, they have been excellent. Upon working with the problem over an extended time, and experimenting with it as a problem for college classes in dressmaking, a few conclusions have been reached which may be of use to others who are interested in the subject. First, the knitted vest over which the strips are glued should be as thin as possible. Any excess material which may appear under the arm should be cut away after the vest is sewed up to fit the figure. The material cut from the lower part of the sleeves makes the best piecings to fill in the high neck, if the ribs of the knitted fabrics run vertical and the pieces are sewed to the vest before the strips are glued on. If the strips are too wet, the danger of warping is greatly increased.

In starting to apply the strips, place two down the middle of the back and middle of the front about three quarters of an inch apart. The space between these strips should be left intact. When the cast is ready to be removed, the cloth between these strips is easily cut so that the halves can be slipped off; when the parts are put together again, the increase in size of the paper form over that of the individual is just about offset when the edges of these middle strips meet.

In gluing the strips in place, the direction which they take varies with each individual. It proved a good rule to let the strip follow the lines of the figure easily. Starting from the front, a strip may go down and back under the arms and finish at the back of the hips. It is important to have the strips smooth, not too tight, and to arrange them so that the thickness is evenly distributed. When one layer of the strips has been put on, the next layer should be placed in the opposite direction. Strips one inch wide should be lapped one half their width. It is necessary for the model to dress as she usually does, since every line and proportion is reproduced in the cast.

The method of procedure to save time and to avoid undue weariness on the part of the model is most important. One should have plenty

[1] The Paper Dress Form, Office of Extension Work, U. S. Department of Agriculture, Washington, Dept. Circular 207.
Woman's Home Companion, October, 1921.
Liberty Paper Co., New York.

of strips cut before the gluing is begun. If the 800 foot rolls of paper are used, strips about the right length can be prepared quickly by using a safety-razor blade to make slanting cuts on opposite sides of the roll. With one person moistening strips and two persons putting them on, a cast can be brought to the point where it may be taken off the figure in about 50 minutes. For some, it has proved much less wearisome to start gluing the strips at the hips, placing the two layers before working on the upper part. The feeling of chill and compression due to having the upper part of the figure encased in the moist, stiff strips is the most disagreeable part of the process, and for that reason it seems best to finish the lower part of the cast before working on the upper. In standing, one shoulder is apt to drop below the level of the other. Before encasing either shoulder, place two or three strips over both shoulders, bringing the strips down well toward the waist.

To finish off the cast after removing from the figure, match up the sides perfectly and glue the parts together while still damp. Cover the thin places with short strips, and bind all cut edges with short pieces laid in vertical lines. This binding diminishes the tendency of the cut edges to turn inward. The remaining two layers for strength and stiffness may then be put on at any time. The final layer is best done with strips about a foot long, since with these it is easy to make the surface smooth.

In using these forms, it has been demonstrated that a very short sleeve is advisable. One should make the cast long enough at the shoulder and sleeve to give a good idea of the thickness and curve of the upper arm, but short enough to avoid interference with the pinning of under arm seams. The group of people observed for the purpose of this paper cut off the sleeve of the cast from the underarm seam to a point about one inch below the edge of the shoulder.

For draping materials on the dress form, a covering of muslin or knitted fabric is helpful, although the many thicknesses of paper withstand a remarkable amount of pinning. For skirts, a cloth or paper lining of the correct silhouette and the correct length shortens the time of fitting and hanging very materially.

The cost of the forms is little. An 800 foot roll of gummed tape costs about 20 cents. Two of these will make a large form. An old knitted vest may be used and the wood for the standard costs about 40 cents. All told, this experiment has been interesting, in point of time saving, and as a stimulus to the better solution of the individual's costuming problems.

EFFECT OF BLEACHING ON TENSILE STRENGTH OF COTTON FABRICS

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(*Continued from June*)

The change in tensile strength shown by the cotton samples under the various bleaching conditions is indicated in tables I to X.

DISCUSSION

In these tables it will be noticed that there is a rise in tensile strength above that of the original sample. This checks the work on yarn at the Manchester School of Technology.

The rise comes, in general, with low strengths of chemic, reaching its maximum at about one chlorometric degree initial strength and dropping back to standard or below at about three and five tenths chlorometric degrees. Bleaching was noticeable at the maximum tensile strength and was complete in strengths below those required to bring breaking strength back to that of the original. This would bear out experimentally O'Neil's statement that bleaching if properly conducted should increase tensile strength.

In attempting to account for the rise in tensile strength various checks were run. First the effect of a three hour water immersion was tried. This was found to have no measurable effect on tensile strength. It was impossible to measure closer than the half pound, so a slight increase in tensile strength due to shrinkage, which might logically exist, was not recorded.

The possibility of the action being one of mercerization due to the $Ca(OH)_2$ formed by the calcium hypochlorite was tested. Three hour exposure to a saturated solution of $Ca(OH)_2$ had no effect on tensile strength. This is not surprising in view of the fact that we cannot secure a strongly alkaline solution from $Ca(OH)_2$ since it is soluble but to the extent of 0.17 grams per 100 cubic centimeters, and forty per cent solutions of alkalies are used in mercerization. The rise in tensile strength seems therefore to be produced by the bleaching action and not by the water or alkali.

When the initial bleach is beyond approximately three and five tenths chlorometric degrees we have a fabric lower in strength than the original.

This is in harmony with the popularly accepted belief that bleaching lowers tensile strength. If bleaching converts cellulose to oxycellulose the amount of conversion should be proportionate to the strength of the bleach.

An investigation was made based on Moore's statement that the depth of color obtained with methelene blue is an indication of the amount of oxycellulose. Samples which had been exposed to the light for three months were weighed accurately and dyed in four per cent methylene blue. The results obtained would show that the amount of oxycellulose is proportionate to the depth of color with methylene blue. The lower grade muslin, sample B, did not seem to show so high a coloration as Sample A, indicating less oxycellulose. The tabulated data shows also that Sample B did not exhibit so much fall of tensile strength after three months light exposure as did the more closely woven fabric. This may be due to the fact that the more open fabric was more thoroughly rinsed, and the effect of the bleach on the fibers was therefore more completely stopped.

TABLE I

Sample A warp. Bleached with bleaching powder

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER SAMPLES WERE IMMERSED THREE HOURS			CHLORO-METRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Arsenious acid	Chloro-metric degrees	Chemic	Arsenious acid	Chloro-metric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	31.5	31.5
318.3	10	0.16	510.1	10	0.10	0.06	34.0	33.0
255.4	10	0.20	392.3	10	0.13	0.07	34.0	33.5
212.2	10	0.24	340.1	10	0.15	0.09	34.0	33.0
106.5	10	0.48	106.2	10	0.31	0.17	34.0	33.0
62.1	10	0.82	82.1	10	0.62	0.20	33.5	33.0
33.2	10	1.27	54.8	10	0.93	0.34	33.0	32.5
29.6	10	1.72	47.5	10	1.36	0.36	33.0	32.0
24.3	10	2.10	30.1	10	1.70	0.40	33.0	31.5
20.9	10	2.44	25.6	10	2.00	0.44	32.5	31.5
18.4	10	2.76	22.2	10	2.30	0.46	32.0	30.0
16.1	10	3.16	19.6	10	2.60	0.50	32.0	30.0
15.2	10	3.37	17.9	10	2.85	0.52	32.0	30.5
14.3	10	3.56	16.8	10	3.02	0.54	31.5	30.0
13.2	10	3.85	15.6	10	3.26	0.59	31.5	29.5
12.1	10	4.19	14.2	10	3.58	0.61	31.0	28.0
11.7	10	4.34	13.7	10	3.72	0.62	30.0	26.0
11.2	10	4.52	13.3	10	3.81	0.71	29.0	24.0

TABLE II

Sample A weft. Bleached with bleaching powder

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER SAMPLES WERE IMMERSED THREE HOURS			CHLORO-METRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Arsenious acid	Chloro-metric degrees	Chemic	Arsenious acid	Chloro-metric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	28.0	28.0
637.0	10	0.08	1020.0	10	0.05	0.03	29.5	29.0
425.0	10	0.12	850.0	10	0.06	0.06	30.0	29.5
283.3	10	0.18	463.6	10	0.11	0.07	30.0	29.5
242.8	10	0.21	392.3	10	0.13	0.08	30.0	29.0
188.0	10	0.27	300.0	10	0.17	0.10	30.0	29.0
150.2	10	0.34	231.8	10	0.22	0.12	30.0	28.0
64.5	10	0.79	80.9	10	0.60	0.19	29.0	28.0
39.2	10	1.30	52.5	10	0.97	0.33	29.0	28.0
18.4	10	2.76	22.0	10	2.31	0.45	28.5	27.5
13.0	10	3.91	15.8	10	3.22	0.68	27.5	26.0
10.9	10	4.57	13.2	10	3.86	0.71	26.0	24.0

TABLE III

Sample A warp. Bleached with sodium hypochlorite

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER SAMPLES WERE IMMERSED THREE HOURS			CHLORO-METRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Arsenious acid	Chloro-metric degrees	Chemic	Arsenious acid	Chloro-metric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	31.5	31.5
348.0	10	0.14	566.6	10	0.09	0.05	34.0	33.5
149.8	10	0.34	212.4	10	0.24	0.10	34.0	33.0
106.7	10	0.48	141.7	10	0.36	0.12	34.0	33.0
48.1	10	1.06	62.3	10	0.82	0.24	33.5	32.5
17.3	10	3.52	17.1	10	2.98	0.54	31.0	30.0
11.6	10	4.36	14.1	10	3.61	0.75	29.5	28.0
10.1	10	5.05	12.1	10	4.19	0.86	27.5	26.0
8.2	10	6.22	9.8	10	5.17	1.05	27.0	25.5

The three month exposure to sunlight was made during the summer and the effect of the strong sunlight was not nearly so great as was expected on the basis of what we know of the effect of sunlight on the strength of fabrics. It is possible that commercially bleached fabrics are not so completely rinsed as were these samples. If material is not thoroughly rinsed after bleaching it becomes very tender, for samples

were bleached with calcium hypochlorite of three and five tenths chlorometric degrees and dried without rinsing. When exposed to sunlight one month they tore as soon as the jaws of the tensile strength machine began to move, no tensile strength being recorded.

TABLE IV

Sample A weft. Bleached with sodium hypochlorite

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER THREE HOUR EXPOSURE OF SAMPLES			CHLORO-METRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Arsenious acid	Chloro-metric degrees	Chemic	Arsenious acid	Chloro-metric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	28.0	28.0
318.5	10	0.16	566.2	10	0.09	0.07	30.0	30.0
149.2	10	0.34	242.4	10	0.21	0.13	30.0	29.5
64.3	10	0.79	86.4	10	0.59	0.20	30.0	29.0
33.2	10	1.27	54.7	10	0.93	0.34	29.5	29.0
21.2	10	2.40	26.9	10	1.88	0.52	27.5	27.0
17.3	10	3.52	17.5	10	2.91	0.61	26.5	26.0
10.9	10	4.57	13.6	10	3.85	0.72	25.0	24.5
9.4	10	5.42	12.1	10	4.21	1.21	24.0	24.0

TABLE V

Sample A warp. Bleached with sodium perborate

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER THREE HOUR EXPOSURE OF SAMPLES			OXIMETRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Sodium thio-sulphate	Oximetric degrees	Chemic	Sodium thio-sulphate	Oximetric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	31.5	31.0
100	2.7	0.089	100	1.5	0.036	0.053	34.0	33.5
100	5.1	0.066	100	2.1	0.049	0.017	34.0	33.5
100	9.8	0.233	100	4.9	0.112	0.121	34.0	33.0
100	15.1	0.359	100	10.7	0.222	0.137	33.5	33.0
100	25.0	0.595	100	16.8	0.401	0.194	33.0	32.0
100	37.0	0.880	100	25.0	0.595	0.285	33.0	32.0
100	54.0	1.287	100	29.0	0.89	0.397	32.5	31.0
100	62.0	1.513	100	43.7	1.04	0.473	32.0	30.5
100	76.9	1.83	100	50.8	1.21	0.62	31.0	30.0
100	117.6	2.80	100	83.2	1.98	0.82	31.0	29.5

The low and average strength of sodium perborate give a rise in tensile strength comparable to that obtained from equivalent strengths of the calcium and sodium hypochlorites. The higher strengths of sodium perborate do not affect the strength of the sample so much as do equivalent strengths of calcium and sodium hypochlorite. Starek claims that

perborate does not affect tensile strength, but this statement was not entirely borne out. It does seem, however, that, either because of its solubility which renders it possible to remove it completely in rinsing, or because the oxygen alone does not so readily form oxycellulose as does the chlorine, sodium perborate does not cause so great a loss in tensile strength as does calcium or sodium hypochlorite.

TABLE VI

Sample A weft. Bleached with sodium perborate

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER THREE HOUR EXPOSURE OF SAMPLES			OXIMETRIC DEGREES ABSORBED	TENSILE STRENGTH	
Perborate	Sodium thio-sulphate	Oximetric degrees	Perborate	Sodium thio-sulphate	Oximetric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	28.0	28.0
100	2.1	0.049	100	1.07	0.022	0.027	30.0	29.5
100	5.1	0.131	100	2.24	0.054	0.077	30.0	29.5
100	8.3	0.198	100	3.61	0.086	0.112	30.0	29.0
100	15.1	0.359	100	9.8	0.233	0.126	29.5	29.0
100	20.0	0.480	100	14.3	0.331	0.149	29.0	27.5
100	32.7	0.78	100	20.8	0.496	0.284	28.5	27.0
100	38.2	0.91	100	25.2	0.601	0.309	28.0	27.0
100	63.8	1.50	100	42.5	1.01	0.49	28.0	27.0
100	109.5	2.61	100	73.9	1.76	0.85	27.5	27.0

TABLE VII

Sample B warp. Bleached with bleaching powder

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER SAMPLES WERE IMMERSED THREE HOURS			CHLORO-METRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Arsenious acid	Chloro-metric degrees	Chemic	Arsenious acid	Chloro-metric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	24.0	24.0
636.9	10	0.08	801.9	10	0.05	0.03	26.0	26.0
283.6	10	0.18	424.8	10	0.12	0.06	26.0	26.0
187.8	10	0.27	366.4	10	0.14	0.13	26.0	25.5
106.3	10	0.48	170.2	10	0.30	0.18	25.5	25.0
64.4	10	0.79	96.2	10	0.53	0.26	24.0	24.0
33.2	10	1.27	57.9	10	0.88	0.39	23.0	22.5
25.8	10	1.98	33.1	10	1.54	0.44	22.0	22.0
18.2	10	2.75	22.5	10	2.26	0.49	22.0	21.0
13.9	10	3.64	16.7	10	3.03	0.61	21.0	21.0
10.4	10	4.90	12.5	10	4.08	0.82	19.0	18.0

TABLE VIII

Sample B weft. Bleached with bleaching powder

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER SAMPLES WERE IMMERSED THREE HOURS			CHLORO-METRIC DEGREES ABSORBED	TENSILE STRENGTH	
Chemic	Arsenious acid	Chloro-metric degrees	Chemic	Arsenious acid	Chloro-metric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	21.0	21.0
463.4	10	0.11	849.9	10	0.06	0.05	23.0	22.5
283.5	10	0.18	510.0	10	0.10	0.08	23.0	22.0
94.6	10	0.54	134.2	10	0.38	0.16	22.5	22.0
61.9	10	0.82	85.0	10	0.60	0.22	22.0	22.0
29.7	10	1.72	39.3	10	1.30	0.42	21.0	21.0
20.8	10	2.44	26.1	10	1.92	0.52	19.0	18.5
14.2	10	3.58	17.2	10	2.97	0.61	17.0	16.5
9.8	10	4.21	12.1	10	4.19	1.02	15.0	14.0

TABLE IX

Sample B warp. Bleached with sodium perborate

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER THREE HOUR EXPOSURE OF SAMPLES			OXIMETRIC DEGREES ABSORBED	TENSILE STRENGTH	
Perborate	Sodium thio-sulphate	Oximetric degrees	Perborate	Sodium thio-sulphate	Oximetric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	24.0	24.0
100	3.7	0.098	100	2.5	0.059	0.039	26.0	26.0
100	5.4	0.128	100	2.8	0.067	0.061	26.5	25.5
100	10.7	0.222	100	4.8	0.114	0.108	25.5	25.0
100	20.8	0.496	100	10.2	0.245	0.251	24.0	23.5
100	38.2	0.910	100	23.5	0.561	0.349	23.0	23.0
100	79.4	1.89	100	52.1	1.26	0.63	22.0	21.0

TABLE X

Sample B weft. Bleached with sodium perborate

INITIAL STRENGTH OF BLEACH			STRENGTH OF BLEACH AFTER THREE HOUR EXPOSURE OF SAMPLES			OXIMETRIC DEGREES ABSORBED	TENSILE STRENGTH	
Perborate	Sodium thio-sulphate	Oximetric degrees	Perborate	Sodium thio-sulphate	Oximetric degrees		Just after bleaching	After three months exposure to light
cc.	*cc.*		*cc.*	*cc.*				
0	0	0	0	0	0	0	21.0	21.0
100	2.5	0.059	100	1.1	0.026	0.033	23.0	23.0
100	3.8	0.091	100	2.1	0.049	0.042	23.0	22.5
100	7.9	0.189	100	3.7	0.088	0.101	22.5	22.0
100	15.1	0.359	100	6.3	0.150	0.209	22.0	22.0
100	54.0	1.28	100	32.7	0.78	0.50	21.0	20.0
100	98.0	2.32	100	62.1	1.47	0.85	20.0	19.5

CONCLUSION

In view of the results obtained it seems that the effect of bleaching on tensile strength is to increase that strength when a low or average strength bleaching solution is used, but to cause a fall in tensile strength with high strengths of bleach or when the bleaching solution is allowed to act on the fiber for a long time, as in the case of the unrinsed fabric.

Since the checks run with water alone and with the saturated solution of calcium hydroxide did not measurably affect the tensile strength, it would seem that the change of tensile strength is due to the action of the bleach itself.

In the presence of sunlight the tensile strength usually falls, the fall being less in the loosely woven sample. The amount of oxycellulose, as indicated by the depth of color in the tests with methylene blue, is also less in the runs on Sample B. This would indicate that where there is bleaching solution left on the fabric there is a continued formation of oxycellulose and a consequent loss in tensile strength.

The action of the bleach on cellulose is conceded to be the formation of oxycellulose. The chemical and physical properties of this compound are not well known but it is possible that the oxycellulose may form a more or less gelatinous layer on the surface of the fiber. Leo Pingal (13), Director of the Public Testing Bureau for Textile Industry, Aachen, Germany, in his tests on the hygroscopic qualities of bleached and unbleached cotton, found bleached cotton to be less hygroscopic than unbleached. This was unexpected, in so much as by bleaching we remove the wax, fatty acids, coloring matter, pectin and albuminous matter, but was explained when it was discovered that the microscope showed a gelatinous coating over the fibers. This coating is very clearly shown by the micrographs accompanying the article.

This coating, probably oxycellulose, might logically explain the rise in tensile strength, for the gelatinous coat would probably prevent the fibers from tearing apart so easily. If, however, the conversion of the cellulose to oxycellulose were so complete as to affect the major portion of the fiber, the tensile strength would fall. This was the effect noticed when higher strengths of bleach were used.

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(Concluded)

HOME ECONOMICS AND INTERNATIONAL RELATIONS

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Fundamentally home economics is international. Everywhere it is the man, the woman, and the children who form the family group, and everywhere is the need for solving the many detailed problems of providing shelter, food, and clothing, and creating a happy family life.

This was very noticeable at the Third International Congress on Home Economics held in Paris at the beautiful Hotel de La Rochefoucauld. April 18–22, 1922. On the International Committee were representatives of many countries. M. Du Prey, formerly French Minister of Agriculture, was President of the Congress, and the other members of the French Committee were important government officials and representatives of various schools and professional groups in France. Delegates were present from thirty-three countries including most of the older and newer countries of Europe, Japan, China, Cuba, Mexico, and the Argentine Republic.

Under the present law, the United States can not participate in any international gathering without special authorization from Congress, and consequently there could be no official representation from this country at Paris. However, the American flag flew in the courtyard after the second day. Many people saw the publications sent from our Department of Agriculture and Bureau of Education, and I had the opportunity of speaking for a few minutes on the home economics work in our country. At the final meeting, at the Hotel de Ville, special thanks were given to America for its assistance and there was much applause, so that our representation, although limited, had perhaps considerable value in promoting better international relationships.

At the first session of the Congress there were greetings from various officials. A summary of home economics work in different countries before, during, and after the war, was presented by M. Dausset, former president of the Municipal Council in Paris and now Senator from the Seine.

The sessions of one day were used for a discussion of home economics in urban schools. With the exception of a woman inspector of home economics from Belgium, the speakers were deputies from various sections in France.

Home economics in the rural districts was the topic on the second day. M. Van Der Vaeren, General Inspector of Agriculture in Belgium, spoke on the work in the primary and secondary schools. French officials discussed extension work and the work in the normal schools of agriculture.

The subject on the third day was home economics in relation to science and to social life. The addresses included a general paper on professional education, a practical one on training for domestic service by Mme. Bonnabry of the Professional School at Fribourg, an excellent presentation of the relationship between science and home economics by Dr. de la Riviere of Pasteur Institute, and a paper on the value of home economics in improving home conditions and thus economic and social conditions.[1]

In addition to the papers announced on the program, innumerable communications were received. This meant that many different topics were presented in a short time and there was little opportunity for reaching any constructive conclusion. Competition among different countries for national recognition, often bringing this rather than home economics into ascendency, made me thankful that sectional jealousies are of so little importance in our American conferences.

A number of the delegates had visited the United States, and told me how much they had profited by what they had seen. Reports came from France, Belgium, Czecho-Slovakia, Poland, Holland, Norway, and Cuba.

In turn, I was struck by the extent to which we had been influenced by Europe in our earlier work and the distance we have gone from it in our more recent work. From various countries came exhibitions of sewing models exactly like those over which I had struggled in my normal training. I remember one which showed the different ways of making fastenings and which had many buttons and buttonholes and hooks and eyes and loops and eyelets arranged in a most useless but orderly way. There were models of hems and tucks and seams arranged in the little books for the first year's course, and the elaborate patching and darning and embroidery in the books for the second year's course. Apparently only in the more advanced work came the actual construction of garments, and there was little evidence of the inclusion of the rich thought

[1] Copies of the proceedings will be available later from the International Office at Fribourg by payment of a small fee.

content which we are recognizing as an important part of such educational work. The same was true of cookery. The emphasis was placed on the gaining of technique, as was the case in the instruction in laundry and housewifery, in which much more time is spent than is customary with us. Instruction is also given in child care but chiefly from the standpoint of the mother's care of a child.

Home economics is required in most countries for the girls in the elementary schools. In the household schools, for the older girls, practically full time is given to the study of home economics, much of it being spent in laboratory work. There is excellent work for the women and girls in industry. The training of teachers is given in special schools usually with a course of only one or two years. The course at King's College, London, is the only one in Great Britain leading to a college degree, but there is interest elsewhere in Great Britain in having the work at certain technical schools recognized by the universities and counted towards a degree. I heard no mention of such interest in the reports from the continent, although there was discussion of the necessity for better professional training of teachers.

Home economics work in Europe, however, has achieved recognition which as yet I think we have not achieved in America. Important government officials in many countries were active participants as speakers or delegates. In France, as I was told over and over again, it is the women of the best families who are interested in the home economics work, for they see the importance of having the daughters well trained to manage every detail of their future homes. This training for home making is everywhere the guiding principle in home economics work, and it is apparently well organized to meet this particular need in the various countries. "L'element vital d'un peuple est au Foyer, et c'est la Femme qui fait ou defait le Foyer," was a statement made over and over again. We hear this, too, in America, but I think I have never heard it stated so vigorously, nor with so much emphasis placed on the influence of home economics in lessening a grave national danger.

In conclusion I should like to make certain suggestions with reference to participation by the Association in any future international conference.

1. If possible, in addition to representation on the International Committee, have an American, resident in the country where the conference is to be held, made a member of the committee on arrangements. This will be especially necessary if the ruling is still in force in the United States against any official participation in international conferences, as

there seems little conception over here of representation except officially.

2. Have as large a delegation as possible, with at least one member who can understand and speak the official language of the conference.

3. Have a well organized exhibit showing in detail the various types of home economics work. Have explanatory notes in French as well as in English. If possible, have a small leaflet for distribution at the Congress, giving a brief description of work being done in various places, and detailed information about sources of help for those who wish to write and for those who plan to visit the United States.

4. Formulate proposals to be introduced at the Congress, which will assist in making American standards influential in promoting home economics throughout the world. Each country has to work out the details of subject matter and method of organization, but the fundamental ideals are the same. At the next International Conference, I am hoping that much more may be accomplished in bringing our work into closer relationship with what is being done elsewhere.

This year I have been studying most of the time in England, but I have been also in Holland, Germany, Austria, Italy, Switzerland, and France, and have attended several international conferences in London as well as this one in Paris. Everywhere there has been the greatest curiosity about America, especially about home life in America and about our educational methods. America is not always liked over here, but it has suddenly become a powerful, although unknown, influence. For this reason it seems most important that our home economics workers keep closely in touch with those in other countries so that we can exert a real influence in helping them to understand the high standards in family life for which we are aiming, and the way in which we are relating our work to various types of educational and social effort. At the same time there is much which we can learn from other countries with longer experience in establishing high standards of home life adopted to local conditions, and in organizing effective educational effort.

EDITORIAL

The American Academy of Political and Social Science. The American Home Economics Association was one of a large number of organizations in educational, industrial, political, and economic fields, requested to send delegates to the annual meeting of the American Academy of Political and Social Science in Philadelphia, May 12–13. The program was a development of various phases of the general topic, America's Relation to the European Situation. Official representatives from many European nations, financiers, writers, industrial leaders, legislators, labor leaders, experts on tariff and commerce commissions, and women from England, France, and Germany, representing international organizations, discussed from their respective points of view the indispensability of American coöperation in the financial, industrial, and political rehabilitation of Europe.

Not only does Europe need America, but these speakers believe that American prosperity is dependent upon European rehabilitation; thus our own standards of living are affected by conditions determining standards of living in Europe. Practically all articles used in everyday life are dependent on some imported material for their production, and economic conditions seemingly remote are reflected in our own life. For instance, the collapse of Russia has destroyed the largest market for Chinese tea and silks; China was one of the largest markets for cotton goods spun in Manchester, England, and, as a result of China's present inability to purchase these goods, over 60 per cent of the spinners in Manchester are unemployed and the standard of living has been lowered to a striking degree; Manchester was one of the great markets for American cotton, and the decline of this market affects the income and standard of living of all persons in this country concerned with the production of cotton. Numerous similar illustrations could be given. International trade, European debts, loans, industrial and political situations are subjects of vital interest, not alone to financiers, politicians, and economists, but to all women who are working for the improvement of the American home and the betterment of living conditions.

Qualifications of a Home Economics Teacher. In a paper recently presented at a conference of home economics teachers at Lexington, Kentucky, Miss Maybelle Cornell, head of the Department of Home Economics, University of Kentucky, sets a high standard of training

and personal qualification for the woman who would teach home eco, nomics. Her training should be divided into four groups: cultural-scientific, technical, and educational. To thorough, balanced development in these lines she must add adaptability, atractive personality, understanding of home problems, and interest in her work and her students. Above all, she must relate her work with the individual to the welfare of the community; she must have a social point of view. Miss Cornell says, "To be a successful teacher of home economics in the secondary schools she must believe in her work as a fundamental need of mankind, as a source of good to the community. This should not be demonstrated through spectacular dinners for different organizations, as these have very little educational value. The teacher should show her work through the improved physical condition of her students and their wholesome mental attitude, through the spirit of the school, and through the improved conditions of the community."

Standards for Work in the Elementary Schools. The latest contribution to the work of setting standards for home economics in elementary schools is made by the Department of Household Arts Education of Teachers College, Columbia University. "Home Economics Information Tests" for girls completing the eighth grade have been prepared by groups of graduate students. This extensive piece of work, carried on over a period of two years, has been given a preliminary test in five different types of classes in New York City.

There are three sets of tests dealing with food, clothing, and other problems of the home, respectively. The various tests in each set have different values of importance, and arrangements for scoring have been simplified. By checking the scores, teachers will see which parts of their teaching have functioned.

Copies of this excellent work may be secured through the Bureau of Publications, Teachers College, and are available for home economics teachers who wish to give these tests to girls completing the eighth grade.

Pirquet's Nutritional Index. Pirquet's strange sounding vocabulary expresses facts which are not new in themselves but which are viewed all the more critically for having been approached in this new fashion; the situation which caused Pirquet to coin the words, *pelidisi*, *sacralama*, *nem*, et cetera, was different from the situation now confronting us in America. After the war, there was an immediate necessity for wholesale feeding in order to save the young life of Austria. Thou-

sands of hungry and undernourished children had to be fed from public kitchens, and a sound and scientific administration necessitated an answer to these two important questions: by what standard should the child be judged underweight and in need of food from the public kitchen; and how much food does he need daily to be brought back to a normal state of nutrition? Pirquet answered the first question by the pelidisi and the second in terms of nems.

The pelidisi is the nutritional index and shows the relationship between weight and the sitting height which Pirquet believes to be a more accurate basis of comparison that standing height. In the normal individual, $\frac{\sqrt[3]{10 \times \text{weight (in grams)}}}{\text{sitting height (in centimeters)}} = 100$ per cent. Deviations from this normal value indicate the state of nutrition; for example, the thinner the person of a given sitting height, the lower will be the percentage of nutrition or the pelidisi. Pelidisi aims to tell the same story as Wood's height-weight scales even though it is based upon sitting height and is expressed in percentages. Pirquet finds that any child with a pelidisi below 95 per cent is sufficiently underweight to need attention. Another word which he uses to describe the conditions found by physical examination is sacratama, also coined by assembling the first letter or syllable of the words of a descriptive phrase. A normal pelidisi almost invariably accompanies a normal sacratama, as would be expected. Reviews of Pirquet's clinics can be read in the medical journals of this country.[1,2]

The nem is the fuel value of one gram of milk; the nem value of other foods is nothing more or less than a ratio of the calorie value of one gram of the food to that of one gram of milk. His reason for adopting such a word is that the meaning of nem can be explained to the layman in an understandable manner, whereas it is difficult for anyone except the physicist to grasp the meaning of the calorie. Pirquet's method of arriving at the optimum amount of the daily feedings by calculating the absorption capacity of the child for his sitting height in centimeters seems too hypothetical for a very serious consideration.

Pirquet's nutritional index, applied to American children and to the measurements for young men accepted by the United States Army, shows a pelidisi of only about 94 to 95 per cent, a value which Pirquet

[1] Faber, H. K., *Amer. Jour. Dis. Child.*, 1920, 19: 478.
[2] Carter, W. E., *Jour. Amer. Med. Assn.*, 1921, 77: 1541.

considers as indicative of marked undernutrition.[3] Faber,[4] has compared the pelidisi of a group of American children with the nutrition rating on the Wood scale for the same group and finds that only about one-fourth showed comparable indices by the two methods and "in many cases the divergences were so great as to be absurd." The Wood scales are admittedly faulty, but the critics of Pirquet's index doubt the remedial effects of a change to a standard which is based largely upon theoretical assumptions rather than on direct observations of thousands of cases as the Wood scales are known to be. There is the possibility, suggested by some of its more lenient critics, of so changing the factor in the ratio of weight to sitting height that there can be made some such pelidisi chart of reasonable accuracy for American conditions which can be adapted to use in the rapid examination of large groups of children.

SYBIL WOODRUFF.

OPEN FORUM

A College Demonstration. The invitation of the Multnomah Hotel manager of Portland, Oregon, to the School of Home Economics of the Oregon State Agricultural College to cook and serve a dinner to the guests of the hotel, came at the end of the senior excursion to Portland to visit factories, packing plants, bakeries, and other establishments, and served as a challenge to 35 young women of that division.

The railroad tickets of the young women were furnished to them by the college and they and the faculty advisors who accompanied them were guests of the hotel management while in Portland, where they spent one day and two nights.

At no time did the hotel management seem to doubt the ability of these young women to carry out this undertaking successfully, but the public and the press, as shown by the interviews of the reporters, had misgivings as to whether college women could measure up to experienced hotel chefs. And there were those who wandered through the hotel kitchen in the afternoon to see if the chef really was not doing the cooking and the girls receiving the credit. These misgivings, however, were dispelled by those who observed and partook of the dinner, which was unanimously pronounced by them and the press as a most successful undertaking. "This is the best meal I have had in the hotel in the three years I have lived here" was one of the many interesting remarks overheard.

[3] Barden, C. R., (Communication), *Jour. Amer. Med. Assn.*, 1921, 77: 1988.
[4] Faber, H. K., (Communication), *Jour. Amer. Med. Assn.*, 1921, 77: 1837.

The following menu was planned by the hotel management and prepared by twelve of the senior women who had taken one or more institutional management courses in the college.

MENU

Ripe Olives Green Olives Salted Nuts
Canape Multnomah

Merry Widow Cocktail

Cream of Asparagus Soup

Tenderloin of sole, Tartar sauce

Roast Chicken, Special Dressing
Fresh Asparagus New Potatoes

Lettuce and Tomato Salad
French Dressing

O. A. C. Parfait
Kisses Macaroons

Coffee

Four of these young women prepared and roasted the 90 chickens, cooked the fish, made the soup and the cakes, and prepared the vegetables; four made the cocktails, canapes, and sauce; four, the salads, parfaits, and relishes. The remaining 23 of the 35 students, after observing the hotel service during their breakfast and luncheon, were prepared to serve the dinner in the Gold Room of the hotel, which was beautifully decorated in orange and black, the college colors, and which accommodated 250 guests at one time. All the students were dressed in their simple white uniforms and low flat-heeled white shoes. Their simplicity as well as their efficiency made a marked impression on the public as evidenced by the remarks of hotel guests and the front space in the Portland papers, given to numerous articles and pictures of the students in the kitchen at work. The greater part of the morning was spent in posing for a moving picture concern and all of the newspaper photographers.

The announcement of the plan and later the success of the undertaking appeared in the Associated Press. The unanimous opinion of the students participating and the division of the college represented is that this experience has been most valuable and delightful, for it helped to demonstrate to the public that college women can put theory into prac-

tice and that trained minds can meet and solve new problems intelligently and efficiently.

The heartiest coöperation was received from the hotel manager, chef, and all of the employees. So pleased were they with the outcome of this experiment that they invited the School of Home Economics to make it an annual affair, serving luncheon in the Gold Room and dinner in the Arcadian Gardens, thereby increasing the number of guests served and enabling a larger percentage of the 90 senior home economics women of the college to have this invaluable experience.

AVA B. MILAM,
Dean, School of Home Economics,
Oregon Agricultural College

Practice Work in Institution Courses (continued). The present arrangement for practical work at Cornell is as follows:

Institution Practice. Girls are placed in every position of the service side to gain practical knowledge of all counter service, supply room work, cashing, checking; they have a week of office work.

Cookery and Marketing. Students cook in large quantities for actual cafeteria use. This work is given with the intent of training future managers so that they may be able to step in at critical times and prepare food, and to give them a basis for figuring elements of fatigue and time as regards their employees. The marketing side of the course is a discussion of methods of purchase in large quantities, and of the forms and sizes in which we purchase.

Institution Management. We discuss forms of organization, labor problems as applied to our work, planning and equipment of institutions.

We need a course in which the girls, one or two at a time, could spend a few days a week with us and actually direct work and help with ordering, and managing. Their other courses make this almost impossible at the present time. If, in time, there could be worked out a scheme of affiliation between schools and an exchange of students, it would be a good thing.

LOIS FARMER,
Cornell University.

BOOKS AND LITERATURE

Nutrition and Growth in Children. By WILLIAM R. P. EMERSON, M.D. New York: D. Appleton and Co., 1922, pp. 342 $2.50.

It is fitting that Dr. Emerson who is generally recognized as a pioneer in the nutrition class movement, should be the first to publish a book on this subject. This book will be welcomed by all who have attempted to follow Dr. Emerson's work during the last decade through his articles in medical journals and other publications; but it will be particularly useful to the pediatrist and to the nutrition specialist both of whom are directly concerned in the problems which the book presents.

The book consists of three sections. In the first, Diagnosis of Malnutrition, the methods of identifying the malnourished child are described. Throughout the book underweight and malnutrition are used as practically synonomous terms; hence standards of height and weight are here considered, and the method of applying them in the classification of children as malnourished, borderline, ideal, and overweight is described. It is clear from the text and from a chart which accompanies it, that Dr. Emerson identifies the malnourished child by the weight-height test; then determines the causes by three examinations which he terms the mental examination, the physical-growth examination, and the social examination, the latter including diet, health habits, and all significant home and school conditions. Section two, Malnutrition and the Home, deals with the factors of home control over-fatigue, exercise, measured feeding, diet, health habits, overweight, the special problems of the pre-school child; in addition it answers some twenty of the most common questions asked by parents. In section three, A Nutrition Program for a Community, Dr. Emerson's nutrition class method is described, and the duties and qualifications of the physician and nutrition worker are outlined, a typical session of one of his classes is pictured, and a nutrition program for a school, for an institution, for a children's camp, and for a whole community are presented. The appendix contains standards of height and weight, medical examination records, and copies of various blanks and devices used in his classes.

In short the book is a fairly detailed description of Dr. Emerson's work on the malnutrition problem, his theories, his methods of procedure, and the results which have been accomplished thereby.

Possibly the weakest point in the book is the tone of finality which it conveys concerning certain problems which are considered by good authorities as far from being definitely settled. Weight, for example, is made to appear a more accurate measure of nutrition than many specialists are willing to admit it to be. That weight is one measure of nutrition no one could doubt, but what per cent deviation is most applicable to the different age groups, and what other standards for judging it should be applied, are felt by many to be subjects for further investigation.

Other weaknesses seem to the writer to lie in the sections dealing with food. It is to be regretted that Dr. Emerson has put the emphasis so largely on calories and has felt it necessary to "offer a word of caution against the excessive use of fruits and vegetables in the effort to supply vitamins in the child's diet" in the fear that these bulky foods will crowd out the ones of higher caloric value. Although Dr. Emerson has "never known a case of malnutrition (determined by weight) that could properly be diagnosed as a 'lack of vitamins,'" it has nevertheless been demonstrated that serious disturbances of nutrition, not necessarily accompanied by underweight, may and do occur when the supply of vitamins is low for any considerable time. Fruits and vegetables, which are liberal sources of these vitamins as well as of important minerals, have been shown in extensive studies of children's diets to be far less

generally used by children than is certainly desirable. It would seem that the word of caution is more needed against the danger of an under rather than an over use of these important foods.

The impression of exactness given in the calorie discussions and estimates seems also quite misleading. Even experienced dietitians can only roughly approximate the caloric value of a diet when actually observing it; when, therefore, the values of diets are computed from lists of foods eaten at home, the results are obviously far from reliable.

A similar criticism might justly be made of the air of scientific accuracy with which a specific cause is assigned for each small rise or fall in the weight line.

That fast eating, reading in bed, sleeping with windows closed, playing during the rest period, may all contribute to loss in weight cannot be doubted, but the impression that one can dogmatically assign any one of these as a cause in a particular case as definitely as a biochemist can account for a similar drop in the weight of his animals should never be conveyed. Dr. Emerson, of course, realizes this and we believe his data would be in less danger of misinterpretation in this regard had he made this distinction clear in the discussion.

Turning to the many commendable features of the book—the emphasis on the medical aspect of nutrition work, the importance of attention to nasopharyngeal obstructions, the need for careful study of every individual case, the value of milk in the diet and the necessity of good food habits, and particularly the insistence throughout on the responsibility of the parents in any program of cure, will all be appreciated by other workers in this field. The description which pictures the undisciplined, haphazard existence led by many children as "an almost unbroken series of dissipations" will be recognized as a correct one; and the pressure brought to bear on parents to take the matter firmly in their own hands will be heartily endorsed. The discussions of exercise, recreation, overfatigue, fresh air, sleep, the care of the pre-school child, and other items of general care are also ones which might be read with advantage by parents and others having to do with the training of children.

LYDIA ROBERTS,
University of Chicago.

Obstetrical Nursing. A text book on the nursing care of the expectant mother, the woman in labor, the young mother and her baby. By CAROLYN VAN BLARCOM, R.N. New York: The Macmillan Company, 1922, pp. 582. $3.00.

This book, written as a text book for nurses, serves first the need for an adequate text book in obstetrical nursing. There is, of course, much of nursing technique that will be of interest only to nurses, but the clear, simple explanation of the normal development of the coming baby, his birth and care, and the suggestions for understanding help for his mother will contribute much toward a realization of the need for adequate maternity care which must be understood by social and welfare workers as well as the general public before we can hope to reduce to its minimum our needlessly high maternity and infant death rate.

Social and welfare workers whose work brings them in contact with mothers and babies will find in this book an explanation for some of the difficulties which prove so puzzling in their work.

ANNE A. STEVENS,
National Organization for Public Health Nursing.

Everyday Manners for American Boys and Girls. By the Faculty of South Philadelphia High School for Girls. New York: The Macmillan Company, 1922, pp. 115.

This little book, we are told, grew out of a real need. "When we began by letting them discuss what to do at a dance we could not have stopped had we wished to do so. A committee was formed and a manual of manners compiled. The evolution of the book is a logical and normal story of supply and demand." A book that came together in this way, through the coöperation of editors and readers to meet a real situation,

could hardly help being a live book. Compared with it the "books of etiquette" are dull and formal.

The different topics are treated under Home, School, and Business Manners, and we have such chapter headings as Having a Guest, Being a Guest, Gifts, At the Telephone, In Trolley Cars, In Stores and Places of Amusement, besides topics that every such book must contain, as Table Manners, Dress, Introductions, Entertainment.

All suggestions are made with authority but often with the explanation of the custom. Some are given with a minutiae which would not be found in books written for older people, but which older people might welcome. The humorous side headings keep the smile going, as "It is only babies that need spoons for all their food." "Don't suck your spoonful of ice cream, eat it." "Of course you never leave *your* things about." "Do you glitter like a jewelry counter?"

An excellent feature to be found at the end of every chapter is "Problems: Who will solve them?"

The charming silhouette illustrations by Ethel C. Taylor are in keeping with the humor and gayety that pervade the book and insure that it will not lack for readers.

MARY HINMAN ABEL.

Elementary Industrial Arts. LEON LOYAL WINSLOW. New York: The Macmillan Company, 1922, pp. 335. $1.20.

This book in its twelve chapters discusses twelve industries, approaching them from the historical point of view, proceeding to present day accomplishments on a large scale, and pausing in detailed directions for actual practice on a small scale. Each chapter is well illustrated and ends with a useful bibliography.

The book is intended for upper elementary grades and is of interest, not only because of its instruction in manipulation, but because of its educational method. "It attempts to combine the related drawing and art with construction and this drawing and construction with an industrial subject matter."

The author believes that, "as regards elementary education, we may truthfully say that construction should not exist for mere construction's sake. . . . . Manual work must be made valuable by being made significant. The manipulation of materials whether concerned with representation, with design, or with construction, in most instances should be undertaken for the purpose of clarifying ideas regarding subject matter directly related to the industries."

Practical Business Arithmetic. BY HELEN J. KIGGEN. New York: The Macmillan Company, 1922, pp. 404.

While this book is primarily intended to meet business needs, there are many parts, and even whole chapters that deal with home economics mathematics. For example, the chapter on "Thrift" includes personal and household budgets; "Units of Measure" deals with dress goods, carpeting, water, gas, and other household utilities; and "Mathematics of the Trades" gives practical problems inmillinery, dressmaking, and food problems.

As stated in the preface, "the author has not only endeavored to develop arithmetical skill, but, through the selection and solution of the problems given, has tried to instill in the minds of the pupils the character-making quality of individual responsibility in money matters, which is an outgrowth of the practice of thrift, and to show the loss resulting from waste, to the individual, to the community, and to the nation."

How to Get on Two Pay Rolls. BY E. A. HUNGERFORD. Indianapolis: Bobbs-Merrill Co., 1921, pp. 64. $1.00.

The subtitle, "A Manual of Personal and Family Finance," explains to some extent the means of getting on two pay rolls.

The book has spaces for an inventory showing assets and liabilities, for bills payable and receivable, for accounts for one year; and in addition it contains a form for scoring by a point system the children's performance of their various tasks.

The introduction contains a fourteen point financial creed and also fifty-seven budget suggestions, the latter, however, are suggestions for general thrift rather than budgeting.

The book is suggestive and helpful, but unfortunately the space for making entries is so cramped that it would be difficult to keep it in good shape.

SARAH J. MACLEOD.

Quantities to Serve 50 Persons is a set of mimeographed recipes compiled from the central kitchen of the Halls and Commons of the University of Wisconsin under the direction of Mabel C. Little. This set will be loaned from the JOURNAL Office on receipt of 10 cents.

Nutrition. The attention of nutrition workers is called to two pamphlets of the New York Nutrition Council—*Height and Weight as an Index of Nutrition*, prepared by the Committee on Statistics, and *Good Nutrition and Adequate Food Allowances for the Family*, prepared by the Committee on Economic Standards. These pamphlets are discussed in the report of the Nutrition Council in the news section of this issue. Both may be secured from the A. I. C. P., 105 East 22nd St., New York City, at twenty-five cents a copy.

The Child and the Home. Home Economics teachers who attended the Alumni conferences at Teachers College in February were greatly interested in an address by Professor Hugh Hartshorne of Union Theological Seminary on "The Child and the Home" in which he outlined the significance of the coöperative training of the child in simple household tasks as giving a basis for the socialized life of the home and also for the religious experience of the child in a family group and for wider social relationships. Professor Hartshorne has developed these ideas in his book "Childhood and Character" (Pilgrim Press). In his address he also referred to Edith Mumford's book "The Dawn of Character" with its chapter on "The Dawn of Religious Consciousness."

A Suggested Outline of Study, based on Mrs. Mary Hinman Abel's "Successful Family Life on the Moderate Income," has just been issued by J. B. Lippincott Company, Philadelphia, and will be sent on request to teachers interested. While written particularly for use in extension teaching and other group study by adults, the material will prove valuable to those who are using Mrs. Abel's book as a text in home economics courses. The outline presents eight different subjects, including the moderate income family, and sources of family income.

Mercure de France. It is a pleasure to find in the literary notices of the Mercure de France that two practical gastronomes, Mm. Curnonsky and Marcel Rouff, are studying methodically all the old French provinces from the culinary point of view. They are also collecting local cooking recipes and all legends and anecdotes of choice, refined food and drink.

In spite of all the troubles left by the war, the fine French tradition of enlightened cookery is maintained. M. Bertrand Guegan has published two fat volumes of "The Flower of French Cuisine," an anthology of choice and master recipes and all the most delicate and exquisite forms of kitchen artistry. Moreover, in his "Almanacs of Cockaigne" he has let some of his collaborators, "inspired by culinary cubism," amuse themselves to the top of their bent and has reprinted little masterpieces like Mallarme's "Three Creole Receipts," "Orange Carp" from the Chinese, his own essay on "Mastication," little works of Brillat-Savarin, chief of all table-lords, and so on. With what art and taste the French amateurs practice their great profession! They are always gourmets, not gourmands; albeit, one thinks not unkindly of that great ecclesiastic, whoever he was, who said that "even gluttony is only a proper appreciation of the benefits of the Creator."

Georges Vicaire, who died the other day, was a distinguished bibliophile as well as gourmet. He was the author of a "Gastronomical Bibliography."—*Extract from editorial in the New York Times.*

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NEWS FROM THE FIELD

Subscription Contest. THE JOURNAL wishes to express its appreciation of the contest in student subscriptions that has been conducted in the various institutions during the spring term, bringing in a total of 557. The figures below show the tangible results for all who passed the "five" mark, between April 1 and July 11. It will be evident that these figures do not represent the true score, as some schools sent in their subscriptions before April, and some schools sent in 100% for the senior class even though their total is far below the record for larger institutions.

Carnegie Institute Tech.	8
College Ind. Arts, Denton, Texas	11
Cornell University	7
Framingham Normal	2
Indiana University	7
Iowa State College	18
Kansas State Normal	6
La. State University	8
Michigan Agricultural College	12
Michigan State Normal	11
N. J. State Normal	8
N. C. College for Women	9
Ohio State College	32
Ore. Agr. College	29
Philadelphia Normal	13
Rhode Island State College	14
Simmons College, Boston	22
Stevens Point Normal	20
Stout Institute	8
Teachers College, N. Y. C.	11
University of California	39
University of Chicago	6
University of Illinois	25
University of Minnesota	34
University of Texas	9
University of Wisconsin	23

Home Economics Conferences. Dr. Tigert, Commissioner of Education, called ten conferences of public school teachers and supervisors of home economics during the spring months.

The programs of these meetings were in charge of Mrs. Calvin, Specialist in Home Economics in the Bureau of Education. They were intended to afford an opportunity for free discussion of public school problems. Replies to questionnaires sent to hundreds of home economics women evidenced that similar problems existed in all parts of the country; hence all the programs included about the same topics.

The relation of the home economics depart ment to the school health program; the place of home economics in the platoon type school; courses of study for junior high schools; elective courses that will interest senior high school girls; improvement of teachers in service were some of the subjects discussed. The conferences were held in New York, Chicago, Spokane, Portland, Oregon, San Francisco, Los Angeles, Logan and Salt Lake City, Utah, Denver, and Kansas City, Mo.

Dinner meetings were usually held in connection with the conferences. At Los Angeles, 164 home economics women sat down together. Miss Bevier was the chief speaker at this dinner. Representative home economics women came from 33 different states.

Special Lectures for Parents. The Pennsylvania School for Social Service in coöperation with the Conference on Parenthood has been conducting a series of lecture-studies on the Bases of Child Development by the following authorities: Dr. Frank D. Watson, Professor of Sociology, Haverford College; Dr. Richard A. Bolt, Director of the American Child Hygiene Association; Dr. Leonard Blumgart, Psychiatrist, New York City; Dr. Joseph K. Hart, Director, The Pennsylvania School; Dr. John Haynes Holmes, Pastor, The Community Church, New York City; Mrs. Amey Eaton Watson, member of faculty in charge of the course.

The Seminar in Child Training, a series of ten lecture-studies, under the direction of Dr. Leonard Blumgart, was also held at the school.

A National Merchandise Fair is to be held in August by the National Retail Dry Goods Association. The Merchandise Fair, although centuries old in Europe, is new to the United States. The Great Merchandise Fairs of Leipsig, Prague, Nijni Novgorod and other centers offer the inspiration for those practical economies which American business is seeking. As many lines of merchandise as ordinarily are bought by the retail trade in mid-summer will be exhibited. The object will be to assemble related lines for the convenience of buyers. The Fair promises a means of reducing selling costs to manufacturers and wholesalers and buying costs to retailers. It is the plan of the Association to hold a series of meetings during the time of the Fair in which business problems having to do with merchandise and merchandise methods will be discussed.

ILLINOIS

Bradley Institute. The Home Economics Department has taken an active interest in the National Better Health Program. The Sophomore class in dietetics under the supervision of Leata Jones, Instructor in Foods and Nutrition, have been keeping personal health records. Many have improved in general health. Miss Jones plans to introduce this health work in the Freshman food classes next year.

Miss Jansen, instructor in the Training School for Nurses at the Proctor Hospital, has given lecture demonstrations on home care of the sick, prenatal and infant care, and first aid. These demonstrations have supplemented the course in home nursing.

Alma Long, Head of the Household Arts Department, presented an artistic and instructive exhibit of historic interest for the annual Open Night, on the twenty-fifth anniversary of Bradley Institute. A bridal outfit made one hundred and fifty years ago, an unusual quilted dress, hoops of the Civil War days, pointed waists and the full skirts of 1810, Paisley spawl, applique quilts, powder horns, artistic old fans, beautiful silk mits, and old parasols were equally interesting. Students dressed in a costume of by-gone days sewed at an old Wheeler and Wilson machine, and ran spinning wheels. A little girl dressed in an old fashioned gown carried a china doll from the play house of 1790.

The Children's and Girls' Fashion Shows, staged the same evening, offered a comparison in costumes of the modern day.

The class in Home Management under the supervision of Geraldine Hadley, Dean of Home Economics, has been formulating a household account book. Groups of students and two instructors have composed a family group in the practice house. The cost of food as purchased per person per meal has averaged twenty-two cents.

The members of this class have also kept personal expense accounts. This has stimulated an interest in budgeting. Many of the students in this class will teach the coming year and it is hoped that this project will lead to actual practice in following a definite plan for expenditure.

MICHIGAN

The Michigan Home Economics Association is issuing a news letter to "offer opportunity for exchanging ideas and for sending out information to members which will stimulate professional interest and fellowship and promote standards of home economics education in Michigan. The first number contains news items, reports of meetings, and an outline of the points brought out in a discussion of the weaknesses of high school preparation of students as revealed in the first year of college work.

The executive committee of the association has recommended that undergraduate associations be developed and that they be urged to affiliate with the state organization with the annual payment of $1.00 for every 25 members.

Detroit Program Against Malnutrition. Detroit has adopted the plan of selecting as malnourished the children who are 15 per cent underweight. All public school children and many from private schools have been weighed and measured. The medical in-

spectors of the Health Department are now giving a physical examination to this entire group which represents about 10,000 children. Those who have no impairing physical defects will be invited to join nutrition classes, under the direction of a trained nutrition worker. The school nurses have all had a special course in nutrition and the nurses who carry on the class work with the children meet the nutrition worker for special instruction.

Those with defects will not be eligible until corrections have been made. By impairing defects are meant severe defects which could hinder metabolism. Siq items are recognized in this group: a moderately or markedly enlarged thyroid, vision below a 20/30, pus discharge from the ears, unmistakable evidence of mouth breathing, a small size infected tonsil or an uninfected tonsil that reaches half way across the median line of the throat, and abscessed teeth.

Each nutrition class will meet with a nurse once a week for instruction in diet and hygiene. Every other week the children will be weighed and the weights plotted on charts. Parents will be expected to attend the weekly meetings. A parent must pledge cooperation before the child is admitted to the class. Twice daily the nutrition class children will assemble for a lunch of a half pint of milk and two graham crackers. Home diets will be surveyed and advice given. Through a grant of $20,000 by the City Council, it is hoped there will be established at least 70 classes of about 20 children each.

In addition to this supplementary feeding program there are a number of voluntary agencies in the city which have been distributing milk to all children in certain schools. The Health Department program will not conflict with this work. The Department will form nutrition classes, but will not serve milk, inasmuch as the children already receive milk from other sources.

To harmonize the work of the various agencies engaged in feeding, and to avoid duplication of effort, the Health Commissioner has appointed a Central Committee on Nutrition on which are represented all public and private school lunch agencies and other groups interested in nutrition.

This program has come about as the result of a study of the state of nutrition of 94,000 school children in the Detroit Public Schools. An excellent survey of this work was presented to the Home Economics Section, Michigan State Teachers Association, by Dr. George T. Palmer, Epidemiologist, Detroit Department of Health.

NEW MEXICO

Contest for Girls in Vocational Home Economics. At the final meeting of the Dona Ana County Teachers' Association, the vocational home economics students, under the direction of Mrs. Elizabeth Kogen, presented an exhibit and contest.

The First National Bank of Las Cruces and eleven other firms offered prizes for a home economics contest. The 75 girls in the contest were selected from 300 taking the work in 13 schools in the county. A majority of the contestants were of Spanish-American or Indian origin, ranging in age from 10 to 19 years.

The girls appeared at the Las Cruces High School, attired in the dresses they had made. The dresses were judged according to the rules of the contest, five points being considered: (1) perfection of stitch, (2) neatness of finish, (3) suitability, (4) beauty of grace and design, (5) harmony of color and design.

At noon the contestants were guests at a picnic lunch prepared by the home economics department of the Las Cruces High School. The awarding of prizes took place in connection with the session of the County Teachers' Association.

On account of the hard times and high taxes, it had been suggested that the vocational work in the county be discontinued. Following the exhibit, which was attended by the County Federation of Women's Clubs in a body, a resolution was passed by that organization that a work so invaluable should continue. The Dona Ana County Teachers' Association passed the following resultion: "Be it resolved that, having seen the benefits and results of vocational education as conducted in this county, we heartily endorse this branch of education."

NEW YORK

The New York Nutrition Council. At the annual meeting of the New York Nutrition Council, held at the Russell Sage Foundation Building, May 18, the reports of the Committees on Statistics and Economic Standards were presented.

The Committee on Statistics had made a careful investigation of the work which has been done on height and weight as an index to nutrition. The report of this committee brings up the following questions: What is the normal weight? What is the relation of weight to height? To what extent are these an indication of proper nutrition? These questions, with careful analysis and deductions, are discussed in the report. It contains suggestions which will cause the average nutrition worker to think more deeply before arriving at final conclusions. Authorities are quoted and imperfections in conclusions are stated. This pamphlet has been printed and may be secured from the A. I. C. P., 105 East Twenty-second St., New York City, at 25 cents a copy.

The Committee on Economic Standards, recognizing the difficulties of various agencies in arranging satisfactory food budgets, has prepared a plan whereby any social worker may work out a satisfactory budget for a child of any age. Further, it has prepared fifteen points in nutrition for the social service worker. These two reports combined in one leaflet have been published and may be secured from the A. I. C. P. at 25 cents.

At one meeting of the Council, Dr. Charles Hendee Smith, Chairman of the Medical Committee, presented a program which brought up to date the latest material on medical aspects of nutrition. The program of the meeting presenting the dental aspects of nutrition was arranged by the Dental Committee, Dr. T. P. Hyatt, Chairman. The Current Events Committee has kept the Council posted on current projects in nutrition, as well as additions to the literature on nutrition. One meeting, arranged by the Council in coöperation with the American Relief Administration, The New York Chapter of the American Red Cross, and the Pediatric Section of the Academy of Medicine, was addressed by Dr. Clemens Pirquet of Vienna. Other out-of-town speakers have been Dr. E. V. McCollum of Baltimore, Dr. Katharine Blunt of Chicago, Cornelia Lyne, representing the National Child Health Council, and Flora Rose of Cornell University.

The membership of the Council includes physicians, educators, dentists, nurses, nutrition workers, social service workers, and representatives of organizations which are carrying on nutrition as a part of their programs.

The officers for the coming year are: Chairman, George R. Bedinger, New York County Chapter, A. R. C.; Secretary, Jean Lee Hunt, Bureau of Educational Experiments; Chairman of Program Committee, Lucy H. Gillett, A. I. C. P.; Treasurer, Dr. M. Alice Asserson, New York Tuberculosis Association.

The College of Home Economics, Syracuse University, opened in the fall of 1918 with 63 students; at the opening of the present school year there were 317 students enrolled. The College was established by Dean Florence Knapp with the conviction that one result of women's part in the war had been to make scientific homemaking mandatory for all generations. It has outgrown its quarters in the Joseph Slocum College of Agriculture and the trustees acknowledge that one of the pressing needs of the University today is a building for home economics. In a cafeteria, carried on under the direction of two students, a noonday meal, consisting of four courses, is prepared and served at cost by the students. The most recent development of the work is the organization of classes in nutrition directed by the medical staff of the College of Medicine in coördination with the home economics faculty. Women regularly enrolled in any of the colleges of the University may elect special work in home economics as a part of their chosen course, and regular home economics students have the option of specializing in different groups during the junior and senior years.

OHIO

The Food Class of the Lincoln Junior High School, Youngstown, under the direction of Bertina A. Leete, solved the problem in that school of running the lunch room with the products of the cooking classes.

Three classes meet each day for two periods of forty minutes each. The work is so planned that each group of two girls, or each individual girl, as the case may be, prepares a dish of family-size portions, and when all are combined, there is enough to serve those who patronize the cafeteria. In the household arts class the work is necessarily lacking in uniformity each day, but during the semester each girl takes her turn at serving at the counter, preparing salads and soups, and making coffee or cocoa. The teacher plans the menus for a week or two in advance, buying accordingly. Wholesalers are glad to sell to the cafeteria, and a local grocer supplies the lesser needs.

The Commercial Department is an ally of the cafeteria, and its students take entire charge of the business side, checking, cashiering, bookkeeping, banking, and writing checks. Other departments also coöperate. As a result the cafeteria has stenciled designs appliquéd on the curtain draperies, oilcloth centerpieces on the tables, wicker bud vases for flowers, artistic price tags in wire holders made by the sheet metal workers, many posters, and a menu board changed daily by one of the art students.

The aim is to sell for cost, plus overhead, the latter including free meals to the girls who work in the cafeteria, and the pay of two dishwashers. The lack of efficient working conditions, and the inexperience of the workers make the overhead large for the number served.

There is sufficient repetition so that pupils become familiar with general and particular processes, and they work in quantity suitable for a family. There is a high standard for the finished product. As each takes her turn serving at the counter, a definite increase in responsibility and initiative has been noticed.

PENNSYLVANIA

At a meeting of the **Home Economics Section of the Central Arts Association of Pennsylvania** held in the Technical High School, Harrisburg, Mr. James M. Glass, of the State Department of Public Instruction, spoke on the subject, The Organization of the Curriculum for the Junior High School. Defining the terms "Program of Studies," "Curriculum and Course of Studies," he applied them practically to the junior high school, the school which must bridge the gulf between the elementary and secondary schools.

A general discussion upon questions pertinent to teachers of home economics followed. Mr. Taylor, also of the State Department of Public Instruction, brought out twelve essential qualifications for the successful teacher.

At the Home Economics Section of Schoolmen's Week, Helen Dodge challenged the workers of the state in her talk, "Fitting the Home Economics Course to the Needs of the Girl." She urged the need for greater knowledge of home conditions in order that teachers may plan their courses in accordance with the actual needs of the home. The association voted to start a state-wide survey of home conditions. A nucleus committee of Philadelphia women was appointed to direct and organize the survey. To this will be added two other members chosen from the state at large. The work is under way at the present time and some usable material should soon be in hand.

The Domestic Arts Section of the Philadelphia Home Economics Association was addressed on April 26 by Professor Hosic, of Columbia University, on "The Project Method in Domestic Arts Education."

SOUTH CAROLINA

The South Carolina Home Economics Association held its annual meeting at Columbia. Miss Swygert of Chicora College, speaking on The Relation of the Homemaker to the Community, said the homemaker has a great responsibility in merely

making the right kind of citizens of her own children. Beatrice Perry, in charge of the cafeteria at Winthrop College, took up the different phases of work—school lunch, cafeteria, tea room, hotels, and hospitals. Florence Ward of the Extension Office, Washington, D. C., outlined A Uniform Home Economics Program. Helen Louise Johnson of New York City discussed the three fold application of efficiency, physical, intellectual, and spiritual, as concerns home economics in the public school. Edith Thomas, regional director for the Southern states in the American Home Economics Association, told of the work being done in North Carolina and of the organization of the Southern Region. After her discussion of the re-organization of the American Association the South Carolina Association decided to affiliate. Christine South was appointed representative councilor, and Sarah Gillman president.

TEXAS

The Domestic Art Students of Sul Ross State Normal College, Alpine, under the direction of Grace Bedell, Head of the Home Economics Department, gave a style show in the auditorium, May 16. The Parade of Costumes was cleverly introduced by a playlet showing a girl's need of training in the selection and designing of clothes. About seventy beautiful costumes—simple ginghams and tissues, fluffy organdies, Hoflin suits, sport suits, and silk and wool dresses—were effectively displayed by the young promenaders who strolled and skipped and pirouetted across the stage to the strains of the violin. As each model appeared, there were flashed on the screen at the right the name of the designer, the cost of material, and the approximate cost of the garment if purchased ready-made. Many of the dresses cost only a half or a third of the prices charged by ready-to-wear houses. The auditorium was filled to its capacity, and the spectators evidenced hearty appreciation for the originality, neatness, and beauty achieved by the sixteen young designers.

UTAH

The Utah Home Economics Association held a special business meeting in Salt Lake City, May 13, for the purpose of adopting a new Constitution and taking care of other business which would enable the Utah Association to affiliate with the American Home Economics Association. They voted to send a delegate to the National Convention in Oregon. The Utah Association has 76 members.

Teacher Training. Genevieve Fisher, of the Federal Board for Vocational Education, recently visited the Utah Agricultural College in the interest of home economics teacher training work. She discussed home economics problems with the staff and the teacher training class. Her visit was shared with the Logan High School home economics students, with whom the college apprentice teaching is done. The high school foods class regarded it a special privilege to prepare and serve, in their dining room, a luncheon in honor of Miss Fisher.

Home Economics Conferences. Utah's Home Economics workers found much immediate pleasure and permanent profit in the two days of conferences, April 28 and 29, under the leadership of Mrs. Henrietta Calvin, from the Federal Bureau of Education. In both meetings, one in the Home Economics Building of the Utah Agricultural College, the other in Salt Lake City, the substance and the spirit of home economics were subjects of lively discussion. Information as to home economics work, which Mrs. Calvin brought from other sections, gave Utah teachers a basis for helpful comparison and analysis of work in this state. Through the conferences Mrs. Calvin gave a bigger view of home economics than it is possible to get without such contacts.

The Fourth Annual Junior Extension Conference was held April 24–29 at the Utah Agricultural College, for the purpose of training local leaders in conducting boys and girls club work in the counties and communities of the state. Before they were eligible to attend the school they were

required to have their club members selected, clubs organized, and projects chosen, and to pledge themselves to carry the project to its completion.

Every morning from 6:45 to 8:30 a daily setting up program was conducted. The leaders then went to their several departments for intensive instruction in the subject matter pertaining to the projects. In addition, a demonstration team was trained in each department, grain and stock judging contests were held, and project outlines were criticized.

Afternoon sessions were devoted to discussion of work common to all clubs. Club meetings, demonstrations, tours, and exhibits were planned and criticized by the group. Demonstrations were given in cleaning and pressing clothing, preserving eggs, treatment of seed potatoes, and other kinds of practical work.

Various social events were given in honor of the leaders. Feature motion picture reels and reels pertaining directly to club work were shown on the campus. The leaders were taught numerous games and were then required to demonstrate their ability to teach them to others. At a camp fire party they played games, sang club songs, and toasted marshmallows while one of the English professors told camp fire stories.

The program for the week was so planned that every event gave something that will help in putting over work for the year.

WASHINGTON

State College of Washington. Leila May DeMers of Eureka, Montana, has just been elected president of the Ellen H. Richards Club, composed of home economics students of the State College of Washington. Olive Hatfield, Tacoma, is vice-president; Myrtle Johnson, Wenatchee, secretary; Jean MacGregor, Hooper, treasurer; and Grace Scroggin, Spokane, reporter.

The University of Washington. Over 200 guests from the Parent-Teacher Association attended the Spring Fashion Show. They visited the Home Economics building and the Practice Cottage, had lunch at the Commons, and attended the Fashion Show which was managed by a committee of home economics girls. Clothing budgets for the college girl were distributed at this time. These budgets are used by the Dean of Women throughout the year in writing to mothers whose daughters are planning to enter college and who want to know how much their clothing is likely to cost. A copy of the budget is on file in the Journal Office and will be loaned on receipt of ten cents.

At the Annual Open House of Fine Arts and Architecture, May 19 and 20, a conference for high school girls was held on the campus.

WISCONSIN

The University of Wisconsin. The annual art exhibit of the Home Economics Department was displayed in the State Historical Museum. The exhibit included dolls in historic costume and examples of art weaving in table runners, pillow covers, tray cloths, hand-bags and rugs, block printing, tie and dye work, and batik.

Each student in the advanced clothing class in the University is making a garment for some child recommended by the Public Welfare. The student visited the home, became acquainted with the mother and family, measured the child, purchased the material, and will give the garment to the child. Old material which the student may have is used instead of new if the instructor approves.

During the interim between semesters the Practice Cottage housed two guests, a three and a half months old baby and her mother. The baby had been placed under the care of Dr. Dorothy Reed Mendenhall. Although the baby was in a serious condition, her only need was proper feeding and the regulation of her daily schedule. These were provided at the Practice Cottage, and the mother was trained in preparing the formula. Improvement began at once and continued after the baby returned to her home.

The theoretical study of the nutritional needs of children as given in the course in nutrition and dietetics is founded upon

intensive studies of the food habits and food consumption of individual children, by the students of this course. Subjects for this study are found among children in the families of different members of the class and of the University faculty. All the food eaten by the child for a three day interval is carefully weighed or measured and its food value calculated; food prejudices and differences in food habits are noted. By this method the student obtains a realization of the scope of the problems involved in the feeding of children as well as the possibility of their solution.

Popularizing Home Economics in the Madison High Schools. To interest girls in their education beyond the elementary school, and to acquaint them with the home economics work in the high school, the following plan was carried out.

The eighth grade home economics classes in the city were invited by the high school home economics girls to visit their classes. The eighth year girls came to the "party" during their regular class periods. The classroom teacher and the principal of the school were guests also. The high school girls acting as hostesses escorted the visitors in small groups though the kitchens, sewing rooms, laundry, cafeteria, and art rooms where work was displayed. In the large living-dining room of the model apartment the guests were comfortably seated while refreshments were served by their hostesses. The principal of the high school joined them and discussed their plans for high school and the courses offered.

NOTES

Isabel Bevier has been elected Professor Emeritus by the Board of Trustees of the University of Illinois. This is the first occasion on which a professor of home economics has been so recognized.

Mrs. Henrietta Calvin has been honored by the presentation of the degree, Doctor of Pedagogy, by Temple University, Philadelphia.

Ola Powell, of the United States Department of Agriculture, has returned to France to carry on food preservation work under the direction of the French Ministry of Agriculture. The work is similar to that done in connection with the extension work of the Department of Agriculture and the State agricultural colleges in this country.

The United States Civil Service Commission announces open competitive examinations for positions in the Indian Service, August 9, September 20, and November 8. At present there are about fifty vacancies in the positions of matron, assistant matron, seamstress, housekeeper, field matron, industrial teacher. For further information address the United States Civil Service Commission, Washington, D. C.

Dr. Ethel M. Watters, Director of the Bureau of Child Hygiene in California and a well-known pediatrician, has been appointed consultant in the administration of the Sheppard-Towner Maternity Act under the Federal Children's Bureau. This Bureau will administer, in cooperation with the States, the federal funds appropriated for promoting the welfare and hygiene of maternity and infancy. All but six states have accepted the provisions of the act.

Course for Student Dietitians. The Presbyterian Hospital, New York City, is offering a course to student dietitians in its newly organized Department of Nutrition. The work covers the various phases of applied metabolic and specialized dietetics, as the preparation, calculation, charting, and supervision of special diets issued to the general, metabolism, and private wards. Filling baby formulae, visiting patients in reference to diet, explanation of cases by physicians, group meetings, and discussions are included. Preference is given to graduates of four-year courses in home economics, as the metabolic work requires a sound background of science.

Positions in the United States are desired by two teachers in Australia who hold certificates from the University of Adelaide and have had two years' training in home economics. They wish to take further training while teaching here. Any one who can suggest such positions would render an appreciated service by writing to Miss Edith Devitt, Supervisor of Domestic Art, Education Department, Adelaide, South Australia.